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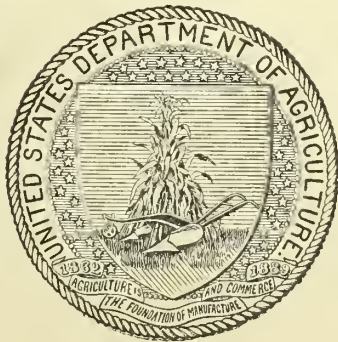
U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU
CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

JANUARY, 1914

BY
G. HAROLD NOYES
SECTION DIRECTOR



PHILADELPHIA, PA.
WEATHER BUREAU OFFICE
MARCH 16, 1914.

Departure of the Mean Temperature from the Normal, January, 1914.



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

VOL. XXVII.

TRENTON, N. J., JANUARY, 1911.

No. 1.

GENERAL SUMMARY.

The weather of January, 1911, appeared to be very unseasonable, due chiefly to the fact that most of the precipitation occurred in warm periods, hence there was little snow. Then again, the temperature averaging almost exactly freezing, resulted in most of the daytime being several degrees above freezing, and only going below freezing at night. In amount of precipitation there was no material variation from the usual occurrence, but as there was so little snow the rainfall gave the impression of being much above normal.

Disagreeably stormy weather prevailed from the 3d to 5th, and on the 24th, 25th and 31st, and resulted from the approach of typical cyclonic disturbances. At the same periods temperatures considerably above normal prevailed. In fact, there were six periods of from two to five days of unusually warm weather; and each was attended by fog of sufficient amount to be noted. Dense fog was prevalent over the whole State, with but little exception, on the 9th, 24th, and from the 27th to the end of the month. The fog of the 27th, 29th and 30th was noteworthy for its penetrating density, in many instances it being visible within large buildings.

TEMPERATURE.

The monthly mean temperature of the State, based on reports of 34 stations, was 31.9°, which was 1.9° above normal. The northern highlands averaged about 7° colder than the southern interior and seacoast. The warmest days were the 9th, 24th, and 28th to 31st, inclusive. On the 30th the temperature averaged twenty or more degrees above normal. The only unusually cold weather occurred on the 13th and 14th, when it was colder than the normal by 25° or more, and minima of zero or lower were reported from every station except Cape May, the State extreme being 18° below zero at Culvers Lake. The extreme highest was 73° at Tuckerton on the 30th.

PRECIPITATION.

The average precipitation for the State, based on reports of 40 stations was 3.85 inches which is normal. The greatest amount occurred at Newark, 6.15 inches, and was 2.39 inches above normal. Approximately half the stations were slightly above and half below normal in precipitation. The greatest amount in 24 hours was 2.58 inches at Cape May City on the 3d-4th. The principal days of precipitation, averaging 9, were from the 3d to 5th, 16th, 17th, 21st, 24th, 25th and 31st. Measurable amounts fell at several stations on 12 days, and at Bridgeton on but 3. The greater portion of the excess of precipitation occurred over the northwestern section of the Red Sandstone Plain and the central divide of the Southern Interior. The snowfall was unusually light; taking the State as a whole amounting to but two and a half inches. The greatest falls were in Sussex county, measuring nearly ten inches, and decreasing to amounts too small to measure at some southern and coast stations. The principal days of snow were the 3d, 4th, 5th, 12th, 15th and 17th.

WIND.

The prevailing wind direction over all sections of the State was from the northwest with a velocity of approximately twelve miles per hour. The dates of wind commonly termed "high" were: 3d, 4th, 12th, 13th, 17th, 18th, 25th and 31st. High wind in Trenton on the 3d blew down fences, signs and other

insecure objects and damaged electric wires thereby interfering to a considerable extent with all forms of electrical communication.

SUNSHINE AND CLOUDINESS.

The hours of sunshine during the month, not considering the Highlands, were approximately forty four percent of the possible. Averaging the whole state, there were 9 clear days, 8 partly cloudy days and 14 cloudy days. This varied all the way from 17 clear days at Clayton to 23 cloudy days at Sussex.

MISCELLANEOUS PHENOMENA.

Solar halos were observed at Atlantic City on the 18th and at Burlington on the 1st and 7th. Lunar halos were noted at Atlantic City on the 14th; at Trenton, Cape May, and Plainfield on the 8th; also on the 1th and 13th at Plainfield; and at Burlington on the 9th. Burlington also reported a lunar corona on the 11th and parhelia on the 14th. A thunderstorm occurred at Indian Mills on the 21st. Sleet was generally reported on the 4th over large sections of the State and from scattered points on the 5th, 6th, 17th, and 19th. Flemington reported a brilliant meteor at 5:50 p. m. on the 23d. Its movement was from east to west and was observed in the south at an altitude of about 70°. At Trenton on the 12th from about 10:15 a. m. to 11:30 a. m. an exceedingly heavy snow squall occurred. At times it was so dense that objects twenty five feet distant were obscured. From this time on, temperatures dropped steadily all over the State with the approaching cold wave, terminating in Trenton from 1 to 3 a. m. with the thermometer standing at 4° below zero. The Delaware river became frozen during this cold wave and remained frozen until the 23d.

COMPARATIVE DATA FOR JANUARY.

Year.	Temperature.			Average Pre- cipitation.
	Mean.	Highest.	Lowest.	
1885.....	31.1	67	0	3.78
1886.....	26.8	60	-10	4.30
1887.....	28.4	67	-6	3.86
1888.....	25.4	59	-12	4.77
1889.....	36.2	60	8	5.68
1890.....	41.3	78	12	2.29
1891.....	34.2	59	10	6.57
1892.....	29.9	67	-6	5.13
1893.....	21.6	54	-21	3.04
1894.....	34.2	61	-4	2.34
1895.....	28.1	64	-4	4.66
1896.....	28.6	61	-7	1.66
1897.....	29.0	64	-6	2.80
1898.....	32.6	64	-10	4.20
1899.....	30.1	60	-21	4.01
1900.....	32.4	64	-5	3.85
1901.....	30.4	63	-6	2.52
1902.....	28.4	58	-5	3.28
1903.....	30.4	57	-5	3.90
1904.....	23.3	58	-34	3.09
1905.....	27.0	60	-16	4.18
1906.....	36.5	74	-5	2.85
1907.....	31.8	71	-19	3.50
1908.....	31.8	60	-6	3.74
1909.....	33.2	69	-12	3.18
1910.....	29.7	54	-15	5.04
1911.....	33.5	63	0	3.44
1912.....	22.3	58	-32	2.82
1913.....	35.9	68	10	3.58
1914.....	31.9	73	-18	3.79

Climatological data for January, 1914.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.							Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation 40 in. or more.	Clear.	Pt. cloudy.	Cloudy.		
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	23	29.1	+1.6	56	28	-5	14	35	3.57	-0*18	1.22	.....	11	13	5	13	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	22	26.9	-0.2	54	30	-10	14	33	3.97	-0.39	.....	0.8	8	10	14	7	nw.	George S. Briggs.
Culvers Lake.....	Sussex.....	848	13	.....	.....	.....	.....	-18	14	.....	3.60	+0.42	1.05	9.4	11	10	6	15	e.	Brice E. Riker.
Dover.....	Morris.....	600	30	26.7	+0.1	53	30	.....	.....	*30	4.35	-0.14	1.38	4.0	11	5	9	17	.....	William C. Harris.
Layton.....	Sussex.....	550	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Warren C. Hursh.
Newton.....	Sussex.....	678	35	25.2	-0.5	52	30	-9	14	25	4.30	+0.80	1.07	5.7	9	8	3	20	sw.	F. Vernon Losee.
Phillipsburg.....	Warren.....	363	32	29.9	+2.0	56	28	-5	14	27	4.08	+0.43	1.17	2.2	9	7	9	15	nw.	D. Wilson Smith.
Sussex.....	Sussex.....	442	24	25.4	-0.7	52	28	-12	14	30	3.79	+0.18	0.90	9.5	8	7	1	23	ne.	George Dymock.
<i>The Red Sandstone Plain.</i>																				
Bayonne.....	Hudson.....	50	24	31.3	+1.2	57	30	-4	14	24	4.68	+0.55	1.29	1.2	12	8	4	19	nw.	Erskine R. Eadie.
Bergen Point.....	Hudson.....	37	17	31.0	+0.8	57	28	-4	14	27	3.86	-0.56	1.35	1.7	8	3	16	12	nw.	William H. Mitchell.
Boonton.....	Morris.....	239	24	.....	.....	.....	.....	.....	.....	.....	3.59	-0.61	1.43	7.1	9	.....	.....	.....	.....	J. W. Demmers.
Chatham.....	Morris.....	234	12	.....	.....	.....	.....	.....	.....	.....	2.87	-1.63	0.85	3.5	10	.....	.....	.....	.....	M. A. Butler.
Elizabeth.....	Union.....	45	35	31.7	+1.6	60	28	-4	14	28	5.40	+1.30	1.66	1.5	11	9	8	14	nw.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	26	31.7	+2.1	57	28	-4	14	27	3.53	+0.06	1.10	1.0	11	11	7	13	nw.	Hiram E. Deats.
Highwood.....	Bergen.....	90	24	30.0	+1.1	58	30	-5	14	28	4.58	+0.51	1.27	3.4	7	7	5	19	nw.	Charles J. Bates.
Jersey City.....	Hudson.....	10	16	31.6	+0.8	58	30	-3	14	23	4.83	+0.97	1.22	1.8	11	8	5	18	nw.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	95	28	34.0	+3.6	63	28	-3	14	36	2.22	-1.52	0.90	0.5	8	.....	.....	.....	.....	Samuel W. Cochran.
Little Falls.....	Passaic.....	175	12	.....	.....	.....	.....	.....	.....	.....	4.01	-0.21	1.12	7.3	12	.....	.....	.....	.....	A. Sweetman.
Mahwah.....	Bergen.....	312	12	.....	.....	.....	.....	.....	.....	.....	1.95	-2.42	0.70	4.7	9	.....	.....	.....	.....	Chas. L. Barker.
Newark.....	Essex.....	159	71	31.8	+2.2	58	30	-5	14	25	6.15	+2.39	1.80	1.6	10	12	1	18	sw.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	139	61	28.5	-2.0	57	28	-4	14	28	4.82	+1.01	1.26	1.2	9	7	6	18	nw.	Earle C. Stillwell.
Paterson.....	Passaic.....	80	44	31.3	+1.9	60	30	-4	14	29	3.76	-0.30	0.98	2.4	10	5	12	14	ne.	Heber A. Probert.
Plainfield.....	Union.....	100	28	31.1	+1.7	60	28	-4	14	29	4.44	+0.55	1.12	0.9	11	6	10	15	ne.	John Neagle.
Pompton Plains.....	Morris.....	195	12	.....	.....	.....	.....	.....	.....	.....	3.51	-0.88	1.16	3.0	8	.....	.....	.....	.....	M. S. Taylor
Somerville.....	Somerset.....	60	32	31.2	+2.0	59	28	-4	14	29	3.61	+0.13	1.07	0.2	9	8	6	17	ne.	A. A. Macdonald.
South Orange.....	Essex.....	200	45	29.8	+1.1	56	30	-4	14	29	3.84	-0.30	1.01	1.0	8	9	6	16	nw.	Dr. W. J. Chandler.
New York, N. Y.....	.....	365	44	31.4	+1.2	58	30	-5	14	28	3.69	-0.10	1.09	1.2	13	6	6	19	nw.	U. S. Weather Bureau.
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	33	35.6	+2.6	72	30	0	14	31	3.15	-0.59	1.50	T.	3	11	7	13	s.	Henry A. Jorden.
Burlington.....	Burlington.....	12	30	32.6	.....	65	30	-1	14	37	3.09	-0.45	1.35	2.4	9	11	11	9	nw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	22	34.8	+3.9	66	29	-1	14	27	.....	.....	.....	2.0	.....	17	4	10	nw.	William T. Farley.
Haddonfield.....	Camden.....	75	27	34.2	+4.2	68	30	-3	14	32	4.12	+0.73	0.88	3.4	10	9	14	8	nw.	Chas. F. Richardson.
Hammonton.....	Atlantic.....	103	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Joseph E. Abbott.
Hightstown.....	Mercer.....	119	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Inlaystown.....	Monmouth.....	18	28	.....	.....	.....	.....	-6	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. E. Bullock.
Indian Mills.....	Burlington.....	76	25	34.4	+3.0	69	30	-3	14	36	4.16	+0.46	0.83	3.0	8	8	13	10	nw.	James M. Armstrong.
Lakewood.....	Ocean.....	54	12	33.1	+1.7	67	30	-4	14	32	4.23	+0.72	1.40	T.	8	3	12	16	nw.	R. W. Holman.
Moorestown.....	Burlington.....	75	52	35.6	+5.5	69	29	-3	14	36	3.76	+0.28	0.91	2.0	8	8	13	10	nw.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	7	.....	.....	.....	.....	.....	.....	.....	2.92	.....	1.01	0.6	7	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	16	.....	.....	.....	.....	.....	.....	.....	2.52	-0.88	1.14	.....	7	14	6	11	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	43	32.2	+1.7	61	30	-4	14	27	2.72	-0.45	1.06	1.5	12	8	8	15	ne.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	21	34.0	+2.3	73	30	-3	14	34	2.99	-0.67	1.10	1.0	7	9	11	11	nw.	Frank R. Austin.
Vineland.....	Cumberland.....	118	45	35.0	+3.0	71	30	-1	14	30	4.17	+0.40	1.16	1.0	7	8	15	8	nw.	Alfred Chalmers.
Woodbine.....	Cape May.....	43	23	36.2	+3.8	68	30	-2	14	30	3.39	-0.26	1.43	0.3	8	15	5	11	n	Prof. R. D. Maltby.
Philadelphia, Pa.....	.....	117	44	35.4	+3.6	67	30	0	14	28	3.46	+0.05	1.35	2.2	9	7	10	14	nw.	U. S. Weather Bureau.
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	25	34.2	+2.8	66	30	-6	14	24	.....	.....	0.30	T.	11	8	7	16	nw.	H. E. Denegar.
Atlantic City.....	Atlantic.....	16	41	35.6	+3.1	64	28	-1	14	26	3.13	-0.27	1.22	T.	10	10	6	15	nw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	30	36.4	+2.3	64	28	3	14	26	4.32	+0.95	2.58	0.2	9	8	12	11	nw.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	7	31.6	.....	66	30	-6	14	30	5.99	.....	2.11	1.0	11	7	6	18	nw.	William D. Martin, Jr.
Means for the State.....	.....	.....	.....	31.9	+1.9	.....	.....	.....	.....	.....	3.79	-0.06	.....	2.4	9	9	8	14	nw.	.....

† On other dates also.

Estimated and incomplete data are not considered in means.

All other records within the State are used in determining the Section means, but the mean departures from normal temperature and precipitation are based only on records from stations that have 10 or more years of observations.

Reference letters, a, b, e, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

Daily precipitation for January, 1914.

Stations.	Day of month.																															Total	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>The Highlands and Kittatinny Valley.</i>																																	
Belvidere.....		†	†	†	.58								†		†		†				.67			*	1.22						1.10	3.57	
Charlotteburg.....		T.	T.	†	1.15							T.				.50		.46					*	1.02	T.			T.		.81	3.97		
Culvers Lake.....			T.	.01	.60	.20			T.		T.		.01			.55		.38					.63	.11	.02				T.	1.05	3.60		
Dover.....			T.	†	†	.95										†	†	.48				.55		*	1.38				.04		.95	4.35	
Layton.....																																	
Newton.....				.18	.98	.35			T.				T.			.01	.32				.45			.69		.22					1.07	4.30	
Phillipsburg.....			T.	T.	.70	.39			T.				T.	.03		.03	.15				.52			.63	.46						1.17	4.08	
Sussex.....				.50	.60											.04	.46				.42			.85		.02					.90	3.79	
<i>The Red Sandstone Plain.</i>																																	
Bayonne.....				.01	.74	.22				T.			T.			.01	.01	.45				.48			.93	.52			.01	T.	.01	1.29	4.68
Bergen Point.....			T.	.02	.80	.14						T.				T.	*	.38			T.	.12				.45					1.35	3.86	
Boonton ||.....				.01	.79	.41	T.			T.							.03	.49	T.			.41	T.		.16	1.27					.02	3.59	
Chatham ||.....				T.	.60	.50	T.										.02	.30	.05			.25			.20	.85			T.		.05	.05	2.87
Elizabeth.....				T.	.03	.85	.44						T.				.02		.51			T.	.52		*	1.37						1.66	5.40
Flemington.....				T.	.03	.27	.48				.02		T.			.10		.17			T.	.27			.78	.29		T.		.02		1.10	3.53
Highwood.....				T.	.01	.92	.35					T.				T.		.56			T.	.38	T.		.83	.39			T.			1.15	4.58
Jersey City.....				T.	T.	1.08	.35		T.	T.			T.			.01	.03	.39		T.		.42			.15	1.22			T.			1.18	4.83
Lambertville.....					.09	.27	.52						.02			.03	T.	.12				.32			.07						.90	2.22	
Little Falls.....					.15	.86	.18							.02			.40	.12				.25			.87	.25				.04	T.	.82	4.01
Mahwah ||.....					.70	.22	.05										.05	.03				.30			.10	.40						1.0	1.95
Newark.....			T.	.24	1.17	.18							T.			.10	.27	.18			.35	T.		1.30	.56						1.80	6.15	
New Brunswick.....				.28	.48	.48							T.			T.	.18	.11				.69			1.01	.33					1.26	4.82	
Paterson.....				T.	.02	.65	.15						T.	.02		.03		.51				.36			.92				.12	T.	.98	3.76	
Plainfield.....				T.	.06	.75	.34						T.			.02	.21	.22		T.	.11	.32			.84	.45					T.	1.12	4.44
Pompton Plains ||.....				T.	.32	.79	T.										.04	.49	T.			.54			.11	1.16					.06	3.51	
Somerville.....					.02	.58	.14									.01		.29				.38			.99	.13					1.07	3.61	
South Orange.....					.01	.30	.32			T.	T.					T.	T.	.30			T.	.50			.90	.50				T.	T.	1.01	3.84
New York, N. Y.....				T.	.18	.58	.20				T.	.02				.01	.22	.17		T.	.09	.23			.74	.35			.01		.89	3.69	
<i>The Southern Interior.</i>																																	
Bridgeton.....				1.25			T.						T.												1.50						.40	3.15	
Burlington ||.....				.04	.68	.50	.06						T.	T.			T.	.10	.03			.20			.13	1.35						3.09	
Clayton.....																		T.							1.25	.64					.72		
Haddonfield.....				.02	.72	.56	.57						T.			T.	T.	.04			T.	.14			.88	.43					.01	.75	4.12
Hammonton.....																																	
Hightstown.....																																	
Imlaystown.....					T.	.70	.30						T.				T.	.15				.20											
Indian Mills.....					.36	.72	.64						T.				.10				T.	.10			.78	.63					.83	4.16	
Lakewood.....					T.	.12	.65	.44					T.	T.			T.	.17				.22			.85	.38					1.40	4.23	
Moorestown.....					*	.95	.58						T.				.09					.13			.91	.42					.68	3.76	
Northfield.....					.58	.58	.17											T.				.05			1.01	.13				T.	.40	2.92	
Pleasantville.....			T.	T.	.27	.36	.13					T.					T.				.06			1.14	.16						.40	2.52	
Trenton.....				T.	.09	.27	.19					T.	T.			.02		.01	.15		.02			.89	.17					.69	2.72		
Tuckerton.....				T.	T.		.72	.40					T.	T.				.05				.08			1.10				.12		.52	2.99	
Vineland.....					.80	1.16	.18			T.	T.		T.				T.				T.			.80	.37						.83	4.17	
Woodbine.....				T.		.25	1.43	.02								.01		.02						1.00	.20						.46	3.39	
Philadelphia, Pa.....					T.	.81	.33	.14					T.			T.	T.	.01		T.	.05	.10	T.		.98	.37					.66	3.46	
<i>The Sea Coast.</i>																																	
Asbury Park.....				T.	.09	1.16	.30						T.			T.	.11	.12	.01		.01	.01			1.15	.29		T.		T.		.15	...
Atlantic City.....				T.	.05	.93	.37	.20					T.			T.	.01		T.			.04			.99	.17		T.			.01	.36	3.13
Cape May City.....					T.	2.40	.29	.02					T.					T.							.97	.23					.05	.34	4.52
Long Branch.....					T.	.14	.98	.47					T.	T.			T.	.04	.32		T.	T.	.25			1.26	.39		T.	.01		2.11	5.99

||| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours.

* Precipitation included in the next following measurement.

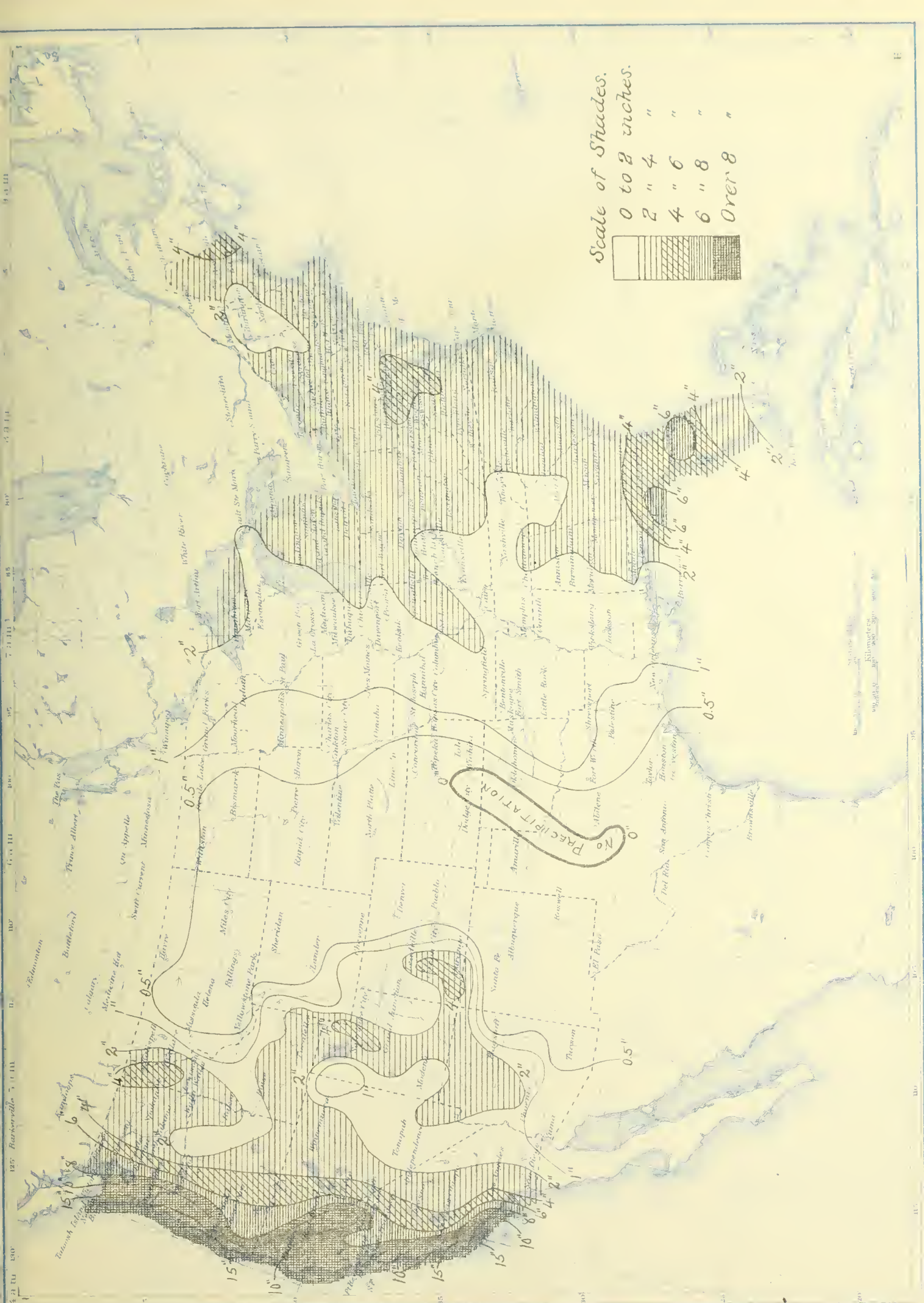
† Separate dates of falls not recorded.

T. Trace, or less than 0.01 inch.

‡ Incomplete.

Daily temperatures for January, 1914.

Stations.		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.
The Highlands and Kittatinny Valley.																																	
Belvidere.....	Maximum	25	25	37	39	42	35	37	36	35	40	36	30	14	19	29	45	39	30	30	39	44	39	40	43	41	32	35	56	48	55	49	36.9
	Minimum	17	13	22	33	31	14	29	31	26	33	24	14	0	-5	10	10	26	16	20	19	32	17	15	26	18	15	26	29	34	35	31	21.3
Charlotteburg.....	Maximum	34	25	31	35	35	33	37	37	39	43	33	28	17	16	25	39	37	32	31	37	39	35	36	45	46	29	37	51	48	54	45	35.8
	Minimum	16	11	21	29	29	9	11	19	19	32	18	10	-3	-10	1	23	28	9	11	28	30	13	3	27	19	11	17	31	31	34	30	18.0
Dover.....	Maximum	25	26	33	34	41	30	36	33	38	38	27	28	10	16	27	38	35	26	29	35	38	27	35	47	42	33	37	52	40	53	39	33.8
	Minimum	15	16	26	32	23	13	21	29	23	27	15	8	-8	...	9	24	21	11	15	29	19	15	9	29	13	13	21	22	34	35	30	*19.6
Layton.....	Maximum	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Minimum	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Newton.....	Maximum	25	23	34	35	35	30	39	34	35	40	30	28	9	15	21	40	35	25	30	32	39	27	37	41	41	32	39	40	42	52	38	33.0
	Minimum	13	7	22	29	21	7	19	29	23	29	13	7	-7	-9	6	18	20	12	12	27	19	15	12	25	16	10	20	30	34	34	29	17.5
Phillipsburg.....	Maximum	32	24	38	39	45	38	36	37	37	41	37	29	15	16	30	44	40	30	32	41	41	31	39	40	43	37	43	56	45	54	46	37.3
	Minimum	18	15	15	33	32	16	25	30	27	34	24	15	0	-5	12	27	30	17	19	31	24	19	19	30	16	16	24	30	36	36	32	22.5
Sussex.....	Maximum	26	21	33	34	35	33	37	36	36	40	30	27	12	18	21	42	35	27	29	35	42	34	38	40	40	23	38	52	40	50	42	33.7
	Minimum	13	5	21	32	19	3	12	30	21	30	12	10	-3	-12	2	13	27	11	12	28	31	14	9	27	15	10	14	30	32	34	29	17.1
The Red Sandstone Plain.																																	
Bayonne.....	Maximum	32	33	39	39	40	31	38	38	43	43	34	33	15	18	31	43	39	30	33	39	43	33	41	50	44	34	37	56	45	57	51	38.2
	Minimum	23	20	30	33	29	17	25	33	31	34	24	15	-1	-4	14	28	30	16	21	30	33	19	20	33	20	18	27	33	36	36	34	24.4
Bergen Point.....	Maximum	32	34	41	39	38	30	39	39	42	42	35	34	14	19	30	42	39	31	32	40	43	30	42	50	45	35	38	57	45	57	47	38.1
	Minimum	22	20	31	34	19	18	24	33	31	24	25	14	-1	-4	13	29	17	21	30	29	20	20	34	18	18	28	32	39	38	35	23.9	
Elizabeth.....	Maximum	31	30	39	39	42	35	40	36	43	44	35	34	19	21	31	44	38	33	32	40	45	37	43	49	48	36	38	60	44	59	51	39.2
	Minimum	25	20	30	33	33	17	23	33	28	35	24	18	3	-4	10	26	33	15	18	29	33	19	15	28	24	17	28	32	35	37	33	24.2
Flemington.....	Maximum	30	30	37	38	45	42	38	37	38	44	38	32	18	20	30	44	37	33	33	38	43	35	40	48	47	41	42	57	52	55	47	39.0
	Minimum	25	20	28	35	33	20	24	32	27	35	25	15	3	-4	9	25	32	18	19	29	33	19	15	26	27	18	27	30	42	36	32	24.4
Highwood.....	Maximum	30	32	37	37	35	30	39	36	41	42	35	34	18	18	29	40	38	33	33	37	43	37	41	49	48	32	35	56	43	58	48	37.5
	Minimum	22	18	28	33	29	14	17	34	27	33	23	16	0	-5	8	21	32	13	18	30	33	18	13	29	21	16	24	33	35	37	32	22.6
Jersey City.....	Maximum	34	33	39	37	37	32	38	38	44	40	31	32	13	17	30	42	36	30	35	40	44	30	41	50	42	36	40	57	48	58	46	37.7
	Minimum	25	21	33	34	32	18	27	33	34	31	24	13	-2	-3	13	29	30	17	21	32	29	20	25	40	19	19	29	34	35	40	35	25.4
Lambertville.....	Maximum	37	37	40	39	49	44	39	39	39	46	39	34	24	22	48	46	43	36	34	39	46	38	39	50	49	44	46	63	54	61	51	42.4
	Minimum	26	20	29	36	38	20	26	32	28	30	27	22	6	-3	12	28	34	20	18	29	34	22	18	28	31	19	28	29	35	36	34	25.5
Newark.....	Maximum	38	36	37	37	35	35	39	37	45	47	35	31	17	20	31	42	55	32	34	41	45	32	42	50	45	34	44	57	54	58	52	39.9
	Minimum	13	11	24	32	32	16	25	30	32	35	24	17	2	-5	14	22	32	16	15	32	32	19	20	35	26	17	26	36	33	40	33	23.7
New Brunswick.....	Maximum	28	29	38	37	38	29	36	37	42	41	29	30	7	4	19	41	36	27	31	37	41	29	42	50	41	36	38	57	43	56	45	35.9
	Minimum	20	19	28	31	21	15	24	30	26	29	18	7	4	-4	10	29	22	10	13	29	23	18	14	31	15	15	26	29	37	35	31	21.1
Patterson.....	Maximum	34	30	37	37	40	33	40	38	41	45	35	33	17	18	27	43	39	32	33	37	45	37	41	48	48	32	37	59	45	60	49	38.4
	Minimum	23	20	29	34	33	17	24	33	30	35	24	17	2	-4	14	24	32	15	19	31	33	19	17	31	19	17	25	33	34	39	32	24.2
Plainfield.....	Maximum	30	31	39	37	40	34	40	38	43	44	34	34	14	21	32	43	37	32	33	40	45	32	43	50	46	37	41	60	46	58	47	38.7
	Minimum	23	21	29	34	30	17	23	33	28	33	21	14	-1	-4	11	27	29	16	18	30	32	19	17	28	19	17	27	31	37	37	33	23.5
Somerville.....	Maximum	32	30	41	41	44	34	40	39	40	43	37	33	18	20	30	46	39	35	34	39	45	32	43	50	46	40	40	59	47	57	48	39.4
	Minimum	25	21	28	31	31	17	23	31	26	34	24	12	5	-4	9	29	28	11	15	28	33	17	14	26	24	16	25	29	34	35	32	22.9
South Orange.....	Maximum	30	31	37	37	40	30	38	36	41	42	32	32	10	12	30	42	38	27	32	40	42	29	40	49	46	35	39	55	45	56	43	36.6
	Minimum	24	20	29	34	26	16	24	33	30	32	20	10	-4	-4	12	28	27	16	20	31	25	19	18	32	17	17	27	33	35	37	33	23.1
New York, N. Y.....	Maximum	36	34	40	37	37	31	38	38	47	42	30	31	10	19	30	42	39	28	35	43	44	30	41	50	45	37	42	58	48	58	56	38.6
	Minimum	25	20	30	34	22	17	26	33	36	30	22	10	-5	-5	15	29	23	14	21	31	22	19	26	40	17	17	30	35	39	42	33	24.1
The Southern Interior.																																	
Bridgeton.....	Maximum	34	37	46	46	49	36	40	45	52	47	35	38	20	20	41	49	40	35	36	49	51	39	43	52	45	49	55	65	67	72	63	44.7
	Minimum	27	23	30	36	32	22	22	29	33	32	26	18	10	0	10	27	32	20	12	30	34	25										



Scale of Miles
0 10 20
Scale of Kilometers
0 10 20

MISCELLANEOUS DATA.

stations.	Pressure.					Wind.				Moist- ure.	Sun- shine.
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, percentage.	Percentage of possible sunshine.
							Miles per hour.	Direction.	Date.		
Atlantic City.....	29.96	30.56	14	29.20	24	10	38	S.	31	76	50
Asbury Park.....		30.50	14	29.12	24						
Cape May.....	29.97	30.59	14	29.23	24	11	44	E.	3	86	.....
Jersey City.....	29.93	30.50	14	29.10	24						39
Long Branch.....	29.94	30.57	14	29.14	24	18	96	N.E.	3	73	.....
Newark.....						9	25	N.W.	13	68	47
New York, N. Y.....	29.94	30.51	14	29.13	24	20	76	N.W.	12	69	38
Philadelphia, Pa.....	29.95	30.59	14	29.17	24	12	47	N.E.	3	70	47
Trenton.....	29.93	30.55	14	29.11	24	14	60	W.	12	77	42

U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU

CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

FEBRUARY, 1914

BY

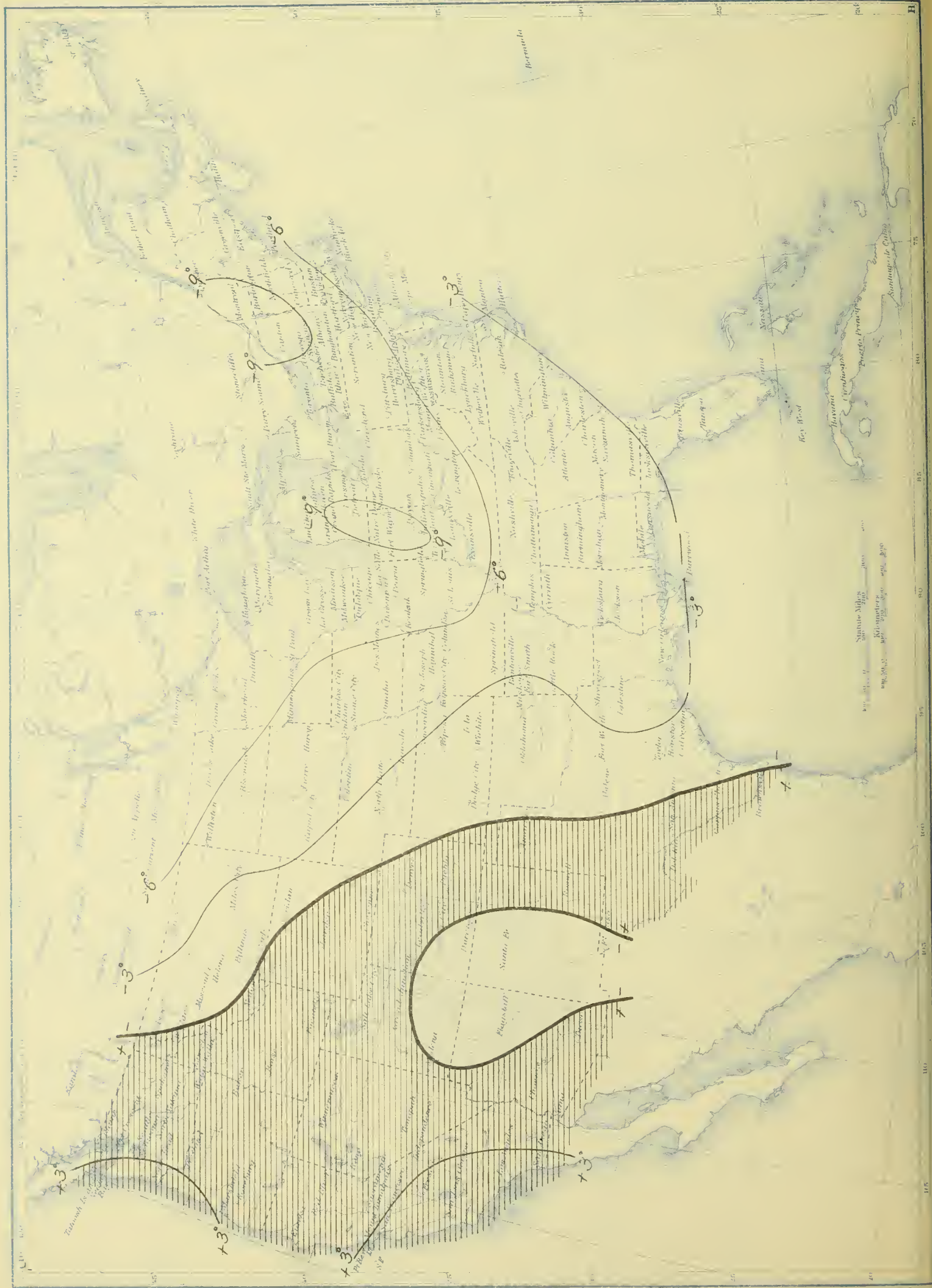
G. HAROLD NOYES

SECTION DIRECTOR



PHILADELPHIA, PA.
WEATHER BUREAU OFFICE
APRIL 4, 1914.

Departure of the Mean Temperature from the Normal, February, 1914.



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

VOL. XXVII. TRENTON, N. J., FEBRUARY, 1914. No. 2.

GENERAL SUMMARY.

The mild weather in New Jersey as experienced in December and January has been followed in February 1914 by winter of distinctly pronounced type. The personal impression of severity was unduly heightened by the continuous warm weather of the last five days of January and the first seven days of February when the thermometer averaged from near freezing to ten and fifteen degrees above freezing. But from the 8th to 26th inclusive the weather was steadily cold; below freezing every night even at Cape May, and only occasionally above freezing during the day except along the shore. During this cold period five general snow storms fell and the snow consequently remained on the ground with but little diminution. All bodies of water were frozen and a better harvest of ice was secured than for several winters past. Ice in the Delaware River was over a foot thick at tide water. In the bays in some instances ice froze to the bottom on shallow bars and damaged oyster beds.

The principal feature during the month was the storm of the 13th-14th which was mostly snow. The depth ranged from nearly a foot in the northern portions of the State to a quarter of that amount in the south. This storm was accompanied by gales which piled up drifts and seriously impeded traffic.

TEMPERATURE.

The monthly mean temperature based on reports of 35 stations was 25.9° which was 4.4° below normal. The northern highlands averaged ten degrees lower than Cape May. The warmest days were the 1st, 3d and 4th, nearly all of the highest maxima occurring on one of those days. The extreme highest for the State was 67° at Indian Mills on the 4th. The 12th and 24th were the coldest days of the year, the mean temperature of those days being from twenty to twenty-five degrees below normal. In the northern half of the State the lowest temperature extreme of the month occurred on the 12th or 13th, but in the southern half on the 25th. The lowest in the entire State was 17° below zero at Culvers Lake on the 12th. Only in eight of the last thirty years has the February record been lower than this year; and the only previous lower records were -18° in 1905 and -22° in 1907.

PRECIPITATION.

The average precipitation for the State, based on reports of 40 stations was 2.85 inches which was 1.05 inches below normal. The general distribution of this amount was somewhat greater toward the south than in the north. The greatest amount at any station was 4.94 inches at Lakewood and the least, 1.89 inches at Culvers Lake. This precipitation was scattered over an average of nine days. Most of the precipitation was in the form of snow. In the northern half of the State the snow totaled approximately sixteen and a half inches, and in the southern half, fourteen inches. During the storm of the 13th-14th the snow (melted) and rain amounted to considerably over an inch during the 24 consecutive hours. The greatest accumulated depth of snow during the month was 23.2 inches at Newark. The principal days of snowfall were the 13th, 14th, 16th, 23d and 24th. The last two days of the month being very warm, the snow melted rapidly and only a few inches remained at the close of the month.

WIND.

The prevailing wind movement during February was from the northwest with an approximate velocity of fourteen miles per hour. The highest recorded wind velocity, during a period of five minutes, was 89 miles per hour at Long Branch on the 14th. Except during the storm of the 13th-14th there was little wind of sufficient force to cause comment.

SUNSHINE AND CLOUDINESS.

There was more sunshine than is usually experienced in a winter month; it approximated sixty per cent of the possible. Averaging the whole State there were 12 clear days, 7 partly cloudy and 9 cloudy days. The largest number of clear days was 18 at Belyidere and the greatest number of cloudy days was 15 at Lakewood.

MISCELLANEOUS PHENOMENA.

Dense fog occurred over practically the whole State on the 4th, and some light fog at other times. Sleet occurred very generally on the 19th, and also on the 6th and 14th to a less extent. Lunar halos were observed in scattered instances along the coast on the 4th and 12th. Solar halos were observed along much of the coast on the 13th and 28th and to a less extent on the 10th, 12th, 17th, 20th and 26th.

One of the most unusual occurrences in this portion of the country was a slight earthquake, commonly reported at 1:35 p. m. on the 10th. The shock was so small that but few persons experienced it and no damage was reported. In Trenton the operatives in one manufacturing establishment felt the tremor to the extent that they left the building in a rush. Otherwise it caused little comment.

COMPARATIVE DATA FOR FEBRUARY.

Year.	Temperature.			Average Pre- cipitation.
	Mean.	Highest.	Lowest.	
1885.....	24.6	54	-2	3.94
1886.....	28.5	64	-10	5.50
1887.....	33.9	69	6	5.24
1888.....	30.6	60	-5	3.53
1889.....	27.7	53	-3	2.49
1890.....	39.9	76	14	4.17
1891.....	38.0	71	1	5.11
1892.....	33.6	58	7	1.63
1893.....	30.1	63	-1	5.73
1894.....	29.7	62	-11	4.42
1895.....	23.6	57	-12	1.28
1896.....	32.1	62	-12	6.77
1897.....	32.5	59	-6	3.61
1898.....	32.7	65	-15	3.48
1899.....	25.8	60	17	6.06
1900.....	31.0	69	-6	5.30
1901.....	25.4	52	-6	0.94
1902.....	27.4	62	-7	6.24
1903.....	33.7	70	-16	4.87
1904.....	24.8	65	-16	2.45
1905.....	23.4	53	-18	2.53
1906.....	30.9	64	-12	2.58
1907.....	23.6	55	-22	2.67
1908.....	28.1	65	-17	4.79
1909.....	37.8	72	-2	4.96
1910.....	30.5	69	-11	3.08
1911.....	30.9	67	-12	2.78
1912.....	27.7	61	-14	2.49
1913.....	30.6	70	-5	2.49
1914.....	25.9	67	-17	2.85

Climatological data for February, 1914.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation .01 in. or more.	Clear.	Pt. cloudy.			Cloudy.
The Highlands and Kittatinny Valley.																				
Belvidere.....	Warren.....	289	23	23.1	-4.3	53	4	-5	26	49	2.20	-2.12	1.34	13.0	5	18	3	7	.....	Sammel J. Hixson.
Charlotteburg.....	Passaic.....	719	22	20.8	-5.5	48	4	-10	16	41	2.06	-2.60	0.81	15.0	5	14	11	3	nw.	George S. Briggs.
Culvers Lake.....	Sussex.....	848	13	.....	.....	.....	.....	.....	.....	.....	1.89	-1.46	0.65	17.9	10	13	9	6	n	Brice E. Riker.
Dover.....	Morris.....	690	30	21.0	-5.2	50	4	-6	12	40	2.38	-1.86	0.90	13.5	7	6	12	10	.....	William C. Harris.
Layton.....	Sussex.....	550	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Warren C. Hursh.
Newton.....	Sussex.....	678	34	19.8	-5.9	48	27	-7	12	33	2.95	-0.88	1.57	17.5	6	11	5	12	n.	F. Vernon Losee.
Phillipsburg.....	Warren.....	363	32	24.0	-3.8	57	4	-3	13	42	2.50	-1.29	1.15	19.5	10	13	6	9	w.	D. Wilson Smith.
Sussex.....	Sussex.....	442	24	20.4	-5.8	49	27	-12	25	52	2.31	-1.23	1.07	18.2	7	12	5	11	ne.	George Dymock.
The Red Sandstone Plain.																				
Bayonne.....	Hudson.....	50	24	25.6	-4.9	54	4	-2	13	35	2.64	-1.37	1.34	16.0	8	12	7	9	n.	Erskine R. Eadie.
Bergen Point.....	Hudson.....	37	17	26.3	-4.1	50	3	-1	12	35	3.57	-0.82	1.76	19.5	9	8	11	9	nw.	William H. Mitchell.
Bonnton.....	Morris.....	239	24	.....	.....	.....	.....	.....	.....	.....	2.58	-1.63	0.84	10.5	10	.....	.....	.....	.....	J. W. Demmers.
Chatham.....	Morris.....	234	12	.....	.....	.....	.....	.....	.....	.....	3.04	-0.90	0.90	15.5	9	.....	.....	.....	.....	M. A. Butler.
Elizabeth.....	Union.....	45	35	26.0	-4.4	60	4	-7	25	49	2.77	-1.49	1.20	18.8	10	13	8	7	nw.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	26	25.0	-5.5	53	4	-7	16	50	2.48	-0.91	0.60	14.0	8	13	7	8	n.	Hiram E. Deats.
Highwood.....	Bergen.....	90	25	22.8	-5.9	53	4	-9	25	42	3.16	-1.37	1.55	16.7	7	10	5	13	nw.	Charles J. Bates.
Jersey City.....	Hudson.....	10	15	26.2	-5.0	54	4	-1	12	32	3.66	-0.28	2.12	17.8	10	11	6	11	w.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	95	27	27.2	-3.2	57	4	-4	26	49	2.05	-1.49	0.77	15.0	7	11	8	9	nw.	Samuel W. Cochran.
Little Falls.....	Passaic.....	175	11	.....	.....	.....	.....	.....	.....	.....	2.38	-1.91	1.10	12.5	9	.....	.....	.....	.....	A. Sweetman.
Mahwah.....	Bergen.....	312	12	.....	.....	.....	.....	.....	.....	.....	3.03	-1.25	0.80	19.0	7	.....	.....	.....	.....	Chas. L. Barker.
Newark.....	Essex.....	159	72	26.2	-3.6	56	27	-2	12	34	3.47	-0.21	1.20	23.2	10	14	3	11	nw.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	139	61	23.0	-8.3	53	4	-2	13	37	2.52	-1.17	0.89	18.9	9	15	6	7	nw.	Earle C. Stillwell.
Paterson.....	Passaic.....	80	43	26.0	-4.2	54	4	-2	12	37	2.80	-1.60	1.57	17.7	11	10	13	5	nw.	Heber A. Probert.
Plainfield.....	Union.....	100	28	25.0	-5.2	56	4	-5	25	43	2.87	-1.04	1.25	17.8	9	11	8	9	ne.	John Neagle.
Pompton Plains.....	Morris.....	195	12	.....	.....	.....	.....	.....	.....	.....	3.24	-1.19	0.98	15.0	10	.....	.....	.....	.....	M. S. Taylor
Somerville.....	Somerset.....	60	31	25.1	-4.9	55	4	-7	25	46	3.20	-0.35	1.10	9.0	7	11	9	8	nw.	A. A. Macdonald.
South Orange.....	Essex.....	200	44	24.1	-4.9	52	4	-2	12	37	2.52	-1.50	0.91	18.0	12	10	10	8	nw.	Dr. W. J. Chandler.
New York, N. Y.....	.....	365	44	25.3	-5.4	52	4	-2	12	30	3.27	-0.47	1.88	17.4	10	10	8	10	nw.	U. S. Weather Bureau.
The Southern Interior.																				
Bridgeton.....	Cumberland.....	30	33	30.0	-3.9	59	3	0	25	33	2.32	-1.78	1.00	9.0	7	16	1	11	w.	Henry A. Jorden.
Burlington.....	Burlington.....	12	28	25.6	.....	56	3	-3	12	46	4.69	+0.95	1.40	14.8	10	15	2	11	nw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	18	28.6	-3.1	56	13	-1	25	39	.....	.....	.....	.....	.....	15	2	11	nw.	William T. Farley.
Haddonfield.....	Camden.....	75	27	27.4	-4.1	58	3	-2	25	42	3.85	+0.53	1.51	18.5	10	11	10	7	nw.	Chas. F. Richardson.
Hammonton.....	Atlantic.....	103	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11.0	.....	.....	.....	.....	.....	Joseph E. Abbott.
Hightstown.....	Mercer.....	119	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. E. Bullock.
Imlaystown.....	Monmouth.....	18	26	23.4	-7.5	.....	.....	-8	25	44	.....	.....	.....	.....	.....	.....	.....	.....	.....	James M. Armstrong.
Indian Mills.....	Burlington.....	76	25	28.0	-4.1	67	4	-7	25	46	2.86	-1.10	1.01	13.5	10	14	6	8	nw.	R. W. Holman.
Lakewood.....	Ocean.....	54	11	27.0	-4.7	58	3	-3	25	40	4.94	+1.61	2.80	13.5	9	9	4	15	.....	Geo. L. Gillingham.
Moorestown.....	Burlington.....	75	52	29.0	-2.0	62	1	-6	25	41	2.84	-0.79	1.54	15.0	7	13	9	6	nw.	.....
Northfield.....	Atlantic.....	25	7	.....	.....	.....	.....	.....	.....	.....	2.22	.....	0.90	7.5	10	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	16	.....	.....	.....	.....	.....	.....	.....	2.72	-0.24	0.88	.....	11	14	6	8	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	43	25.6	-5.1	53	4	-1	13	34	3.00	-0.19	1.25	17.1	11	12	5	11	w.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	21	28.8	-3.3	60	3	-6	25	37	2.08	-1.71	0.70	10.5	9	11	9	8	nw.	Frank R. Austin.
Vineland.....	Cumberland.....	118	46	28.7	-3.8	57	4	-1	25	34	2.47	-1.58	1.20	7.0	7	13	9	6	nw.	Alfred Chalmers.
Woodbine.....	Cape May.....	43	23	30.2	-2.4	57	4	-1	25	36	2.35	-1.70	1.00	.....	10	16	1	11	.....	Prof. R. D. Maltby.
Philadelphia, Pa.....	.....	117	44	29.0	-3.8	56	3	3	13	28	3.32	-0.06	1.37	15.7	11	12	7	9	nw.	U. S. Weather Bureau.
The Sea Coast.																				
Asbury Park.....	Monmouth.....	22	25	30.2	-1.7	55	4	1	25	29	.....	.....	.....	.....	10	8	10	nw.	.....	H. E. Denegar.
Atlantic City.....	Atlantic.....	16	41	30.2	-2.8	57	4	3	25	30	2.67	-0.60	1.28	9.9	11	10	9	9	nw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	36	31.5	-2.6	56	4	5	25	28	2.50	-0.79	0.76	11.6	10	10	10	8	n.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	7	25.6	.....	56	4	-2	12	36	4.36	.....	1.87	20.8	11	11	6	11	w.	William D. Martin, Jr.
Means for the State.																				

† On other dates also.

Estimated and incomplete data are not considered in means.

All other records within the State are used in determining the Section means, but the mean departures from normal temperature and precipitation are based only on records from stations that have 10 or more years of observations.

Reference letters, a, b, e, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

Daily precipitation for February, 1914.

Stations.	Day of month.																															Total.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>The Highlands and Kittatinny Valley.</i>																																	
Belvidere.....						*	.48				T			1.31						.08			.30									2.20	
Charlotteburg.....							.52				T			.81		.26				.47	T		T		.01							2.06	
Culvers Lake.....	.05		T		T	.15	.32				T			.65		.15	.05	.05		.44	.02		T									1.89	
Dover.....						*	.15						*	.90		.40	.05			.58												2.58	
Layton.....																																	
Newton.....					T	.13					T			1.57		.21	.15		.54					.05								2.95	
Phillipsburg.....			T	T		.07	.30				.03			1.15		.20	.01	T	.54	.08		T	.02	.10		T	T					2.50	
Sussex.....						.03	.12							1.07		.12	.03	.10	.54													2.31	
<i>The Red Sandstone Plain.</i>																																	
Bayonne.....						.15	.31			.05	T		T	1.34		.22		T	.53	.02			T	.02								2.61	
Bergen Point.....						.20	.33				.04			.25	1.76		.25		T	.60	.05			T	.09							3.57	
Boonton II.....	.84						.38	.09		T				.60	.02	.04	.05	.05	.23	.28			T	T								2.58	
Chatham II.....	.90						.30	.15			.05			.90	T	.15		T	.15	.40			T	.04								3.04	
Elizabeth.....						*	.52			.04				1.20		.20	T	T	.47	.15			.04	.15								2.77	
Flemington.....						.06	.41				T		T	.60		.40	T		.56	.14			.20	.11								2.48	
Highwood.....			T		T	.05	.37				T			1.55		.27	T	.37	.30	.25			T	T	T							3.16	
Jersey City.....					T	.18	.31	T	T	.04	T			.05	2.07		.33	.01	T	.58			.02	.07								3.66	
Lambertville.....						.08	.42				T			.77		.27	T			.17			.12	.22								2.05	
Little Falls.....						.27	.16			T	T			.25	.85		.18	.05	.03	.57			.02									2.38	
Mahwah II.....	.80						.40	.13						.60	.40		.50		.20													3.03	
Newark.....						.42	.28	.02		.05				.35	.85		.50	.20	.60				.20									3.47	
New Brunswick.....					T	.25	.23			.04	T			*	.89		.27		T	.46			.12	.26								2.52	
Paterson.....			T			.08	.35			T	.01			1.57		.18	.01	.03	.49	.06			.01	.01								2.40	
Plainfield.....					T	.24	.25	T		T	.05			.25	1.00		.30	T	T	.62			.02	.14								2.87	
Pompton Plains II.....	.78						.35	.12			.03			.98	.08	T	.14	.08	.06	.62			T	T								3.24	
Somerville.....						.60	.40				T			1.10					.56	.15			.12	.27								3.20	
South Orange.....						.20	.28		.01	.02	.04			*	.91		.30	.10	T	.55			.08	.03								2.52	
New York, N. Y.....						.25	.15	T	T	.06	T			.29	1.59		.34	.01	T	.50			.07	.01								3.27	
<i>The Southern Interior.</i>																																	
Bridgeton.....						T	.35						*	1.00		.10		.30	.36				.21									2.32	
Burlington II.....	1.04						.48	.25			.05	T		.68	.72	T	.08		.24	.55				.60								4.69	
Clayton.....						T	.52				.10			*	.86		.20					*	.60										
Haddonfield.....						.35	.33				.05			.15	1.51		.13	T	T	.73	.02			.48	.10								3.85
Hammonton.....																																	
Hightstown.....																																	
Imlaystown.....																																	
Indian Mills.....				.12		.09	.40			T	.04			T	1.01		.10		.60	.14			*	.36									2.86
Lakewood.....				.12		.26	.50				.06			T	2.80		.14	T	.57	T			.25	.24									4.94
Moorestown.....						.10					T			T	1.54		.09		.65	.08			.19	.19									2.84
Northfield.....						.28	.33				.01			.08	.90		.07		.33	.08	T		.04	.10									2.22
Pleasantville.....						.43	.24				.10			.10	.88		.15		.46	.04	.07		.18	.07									2.72
Trenton.....				T	T	.23	.24		T	.02	.01			.58	.67		.12	T	.05	.63	T		.44	.01									3.00
Tuckerton.....				T		.55	.15				.10			*	.40				*	.43			.05	.40									2.08
Vineland.....				.03		T	.38				T			.02	1.18					.36			.05	.45									2.47
Woodbine.....						.11	.43				.03			.05	1.00		.08		.30	.12			.05	.18									2.35
Philadelphia, Pa.....						.43	.29			.01	.02			.43	.94		.07	T	.01	.62			.49	.01									3.32
<i>The Sea Coast.</i>																																	
Asbury Park.....																																	
Atlantic City.....			T		T	.36	.20			T	.01			.37	.91		.10		.02	.34	.12		.19	.05									2.67
Cape May City.....			T			.35	.09				.02			.26	.50		.11			.38	.54		.20	.05									2.50
Long Branch.....				.03		.28	.48			T	.09			.07	1.80		.36			.56	.12		.20	.37									4.36

|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours.

* Precipitation included in the next following measurement.

† Separate dates of falls not recorded.

T. Trace, or less than 0.01 inch.

‡ Incomplete.

Daily temperatures for February, 1914.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.
The Highlands and Kittatinny Valley.																																
Belvidere.....	Maximum	43	42	40	53	36	35	33	25	25	36	31	13	19	34	27	27	23	32	32	32	31	32	35	32	31	42	48	46	.....	33.4	
	Minimum	31	26	26	29	29	24	22	18	9	18	11	-1	-3	13	10	-1	7	18	26	26	18	32	32	31	-4	-5	13	18	.....	12.8	
Charlotteburg.....	Maximum	40	38	46	48	37	36	42	43	23	33	31	13	15	31	31	19	20	26	31	26	23	32	32	32	29	40	46	47	.....	31.8	
	Minimum	32	24	18	35	23	18	28	20	7	14	9	-8	-7	10	9	-10	8	7	15	5	5	32	23	17	30	42	47	46	.....	9.9	
Dover.....	Maximum	41	38	44	50	34	31	43	25	22	34	22	9	15	19	28	28	25	32	25	27	32	23	17	30	42	47	46	.....	30.7		
	Minimum	33	24	21	27	24	20	25	19	8	18	0	-6	-6	13	2	-3	9	12	25	14	5	-3	6	-3	-2	2	18	18	.....	11.4	
Layton.....	Maximum	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	Minimum	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Newton.....	Maximum	40	36	33	30	32	32	43	27	22	34	26	14	14	31	21	20	20	26	30	25	24	21	23	15	28	42	48	46	.....	28.7	
	Minimum	33	23	20	16	23	20	25	19	9	17	9	-7	-7	10	8	-3	3	5	21	11	5	6	-3	-4	11	15	20	.....	.....	10.8	
Phillipsburg.....	Maximum	44	42	41	57	41	34	46	29	25	35	32	12	18	32	24	22	31	32	26	30	36	32	32	18	27	43	47	45	.....	33.0	
	Minimum	35	26	27	35	29	23	27	21	10	19	12	-1	-3	13	11	1	9	20	26	14	9	6	3	-2	0	1	17	21	.....	15.0	
Sussex.....	Maximum	41		39	47	36	33	45	32	23	32	29	6	13	31	19	20	23	25	27	24	25	30	31	7	14	29	45	49	46		30.1
	Minimum	33	23	23	33	26	20	31	20	8	16	-5	-8	-7	10	9	12	6	-1	21	10	5	10	-8	-12	-7	12	15	.....	.....	10.8	
The Red Sandstone Plain.																																
Bayonne.....	Maximum	45	41	50	54	39	38	44	34	26	36	28	10	19	33	28	24	25	30	32	29	26	38	35	16	28	44	48	47	.....	33.8	
	Minimum	35	28	28	38	29	24	34	25	13	22	9	-1	-2	18	8	8	11	21	26	18	10	11	13	1	0	9	23	25	.....	17.3	
Bergen Point.....	Maximum	45	42	50	45	40	38	47	37	36	37	31	11	18	35	24	23	26	30	32	31	36	36	35	25	26	43	48	47	.....	34.8	
	Minimum	35	28	28	38	30	25	33	26	14	21	10	-1	-1	18	14	8	10	22	27	18	12	10	10	2	2	8	24	26	.....	17.8	
Elizabeth.....	Maximum	47	44	51	60	42	36	47	39	27	37	34	13	19	36	26	27	26	31	33	32	32	37	35	22	30	48	51	48	.....	36.1	
	Minimum	35	25	25	40	28	25	34	24	13	17	13	-1	-1	17	12	-2	8	21	27	20	12	4	5	4	-7	-1	18	20	.....	15.9	
Flemington.....	Maximum	48	46	46	53	43	35	47	35	28	36	32	16	18	32	26	25	25	30	33	32	34	38	38	22	33	48	50	42	.....	35.0	
	Minimum	36	26	24	37	30	25	34	24	12	18	13	1	-2	14	10	-7	5	20	27	19	13	0	14	0	-1	-2	9	17	.....	14.9	
Highwood.....	Maximum	46	41	47	53	41	34	46	35	27	37	31	14	18	32	25	20	25	29	31	29	32	35	34	13	26	40	46	45	.....	32.9	
	Minimum	36	26	23	23	26	22	33	24	12	20	12	-2	-3	15	12	-5	-5	2	26	17	9	-4	12	-1	-9	-2	18	17	.....	12.6	
Jersey City.....	Maximum	49	40	50	54	39	37	47	31	27	38	29	11	19	32	23	24	24	31	33	29	25	36	34	18	26	43	47	46	.....	33.6	
	Minimum	36	29	31	39	31	27	31	25	14	23	9	-1	-1	19	13	11	11	22	28	19	11	17	12	3	2	11	24	29	.....	18.8	
Lambertville.....	Maximum	48	48	53	57	55	39	49	47	30	37	35	23	19	33	33	27	27	31	35	34	33	37	38	24	29	45	49	47	.....	37.9	
	Minimum	36	28	26	38	30	26	34	24	12	21	17	3	0	13	12	1	11	23	27	20	14	7	15	4	-1	-4	10	18	.....	16.6	
Newark.....	Maximum	45	43	50	45	38	35	47	38	27	37	32	14	18	34	27	25	24	30	34	32	30	36	32	19	27	46	56	47	.....	34.6	
	Minimum	32	39	28	29	29	24	33	24	12	21	12	-2	-2	12	13	7	9	20	27	20	11	16	13	2	0	12	26	29	.....	17.7	
New Brunswick.....	Maximum	44	38	48	53	36	36	46	27	23	33	20	12	26	33	23	23	24	29	32	26	27	35	22	15	22	40	46	45	.....	31.6	
	Minimum	34	25	25	31	26	23	27	20	8	20	1	0	-2	17	3	4	10	22	26	16	11	7	8	0	-2	3	19	25	.....	14.5	
Paterson.....	Maximum	46	42	48	54	44	34	48	37	29	38	31	14	19	32	25	26	26	30	32	31	29	36	35	19	31	47	51	48	.....	35.1	
	Minimum	36	28	26	39	29	24	33	25	13	21	13	-2	-2	15	12	4	11	13	27	19	11	5	14	2	1	10	25	24	.....	17.0	
Plainfield.....	Maximum	47	43	48	56	39	36	47	32	26	36	31	14	19	21	26	28	25	31	34	29	31	38	35	22	27	44	50	47	.....	34.4	
	Minimum	35	27	25	39	29	25	32	24	12	16	8	0	-2	15	11	0	8	23	27	19	12	5	10	3	-5	1	14	20	.....	15.5	
Somerville.....	Maximum	48	45	48	55	45	36	48	39	28	36	35	14	20	35	28	26	25	30	34	32	30	38	36	23	27	45	49	43	.....	35.6	
	Minimum	35	32	23	36	28	24	33	19	11	15	14	0	-3	14	7	-2	8	20	26	19	13	9	11	1	-1	-1	12	16	.....	14.6	
South Orange.....	Maximum	45	38	48	52	35	35	46	32	23	37	25	7	19	32	21	24	23	30	34	27	25	36	29	16	25	42	47	45	.....	32.1	
	Minimum	35	26	27	35	29	24	32	23	12	19	6	-2	-2	17	9	3	10	21	27	15	10	10	2	1	5	22	25	.....	16.1		
New York, N. Y.....	Maximum	45	39	48	52	36	37	46	29	26	40	25	10	24	32	23	24	23	32	34	29	26	36	24	16	24	43	46	46	.....	32.7	
	Minimum	36	28	33	36	28	26	29	23	12	24	3	-2	-1	17	12	13	12	22	26	13	10	18	8	1	1	13	27	32	.....	17.9	
The Southern Interior.																																
Bridgeton.....	Maximum	52	58	59	55	44	45	45	37	32	42	38	20	25	40	30	30	42	37	33	30	42	37	19	8	27	42	50	47	.....	38.9	
	Minimum	35	28	41	40	32	29	36	24	18	21	19	5	5	25	10	12	16	25	33	25	16	17	12	12	0	9	20	26	.....	21.0	
Burlington §.....	Maximum	48	43	56	55	39	41	48	32	28	39	26	15	34	34	25	28	30	33	33	27	30	39	20	5	26	43	49	46	.....	35.2	
	Minimum	35	28	28	31	31	27	29	24	15	14	18	3	3	13	8	12	12	25	23	15	12	15	5	-3	-3	3	18	.....	15.9		
Clayton.....	Maximum	61	47	56	56	50	40	48	47	30	41	40	22	19	33	31	25	28	40	34	33	26	40	38	15	25	41	47	44	.....	37.8	
	Minimum	35	29</																													



MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.				Moist-	Sun-
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, percentage.	Percentage of possible sunshine.
							Miles per hour.	Direction.	Date.		
Atlantic City.....	30.16	30.68	13	29.18	14	10	29	E.	14	69	64
Asbury Park.....	30.17	30.68	13	29.31	14	11	36	NW.	14	80	.....
Cape May.....	30.14	30.70	13	29.17	14	19	89	NE.	14	71	59
Jersey City.....	30.14	30.75	13	29.09	14	19	89	NE.	14	71	.....
Long Branch.....	30.14	30.75	13	29.09	14	19	32	NW.	14	60	.....
Newark.....	30.14	30.70	13	29.36	14	20	75	NW.	14	57	57
New York, N. Y.....	30.16	30.69	13	29.30	14	12	39	NW.	14	67	62
Philadelphia, Pa.....	30.16	30.69	13	29.30	14	12	39	NW.	14	67	62
Trenton.....	30.14	30.67	13	29.26	14	14	48	NE.	14	70	61

UNIVERSITY OF ILLINOIS
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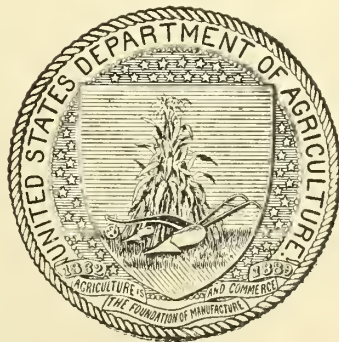
U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU
CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

MARCH, 1914

BY
G. HAROLD NOYES
SECTION DIRECTOR



PHILADELPHIA, PA.
WEATHER BUREAU OFFICE
APRIL 24, 1914.

Departure of the Mean Temperature from the Normal, March, 1914.



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Section Director.

VOL. XXVII. TRENTON, N. J., MARCH, 1914. No. 3.

GENERAL SUMMARY.

The typical winter conditions of February continued into March only seven days of which were not many degrees colder than the average. The great snow storm in the middle of February left snow on the ground into the first of March which opened with one of the most severe storms on record so that the ground was covered with snow almost continuously untill the middle of the month, when a warm wave melted it. Ice covered nearly all bodies of water, and the weather was unusually clear with fresh northwesterly winds. There were but two warm periods in the month, from the 15th to the 18th and from the 25th to the 28th. The first warm period, however, caused the greatest change, owing to the fact that mean temperatures passed at that time from slightly below freezing to well up in the forty's and hence caused rapid melting. The second warm period practically removed all snow remaining in all portions of the State. The severity of the weather of course greatly retarded all lines of out-door work, and the destruction wrought by the storm of the first was not repaired as rapidly as would have been the case under more advantageous weather conditions. Agricultural operations were at an absolute standstill.

TEMPERATURE.

The monthly mean temperature based on reports of 34 stations was 35.4° which was 2.6° below normal. The northern half of the State was about two degrees below normal, and the southern half about four degrees below normal. The 16th and 17th over most of the State were nearly ten degrees above normal, and the 26th and 27th more than fifteen degrees above normal, but the remainder of the month was subnormal in temperature, running to a deficiency of nearly twenty degrees on the 21st. The 21st was one of the coldest days in the month, and the lowest extreme occurred on that day at Vineland when it was 6° below zero. The other cold days were the 12th and 13th when minima from zero to ten above occurred. The low readings on the 21st in the southern portions of the State were the result, not of a typical cold wave, but of excessive radiation on a quiet, still night. At Lahaway in the Jersey pines on the 13th it was 1.5° which is also indicative of the extremely low temperatures that occur in the interior, and in relatively the same locality the snow was a foot deep on a level on the 15th. The warmest weather was the 27th, when readings of 75° occurred at six stations scattered all the way from Passaic to Cumberland Counties.

PRECIPITATION.

The average precipitation for the State, based on reports of 42 stations, was 3.65 inches which was 0.37 inch below normal. The highland and coast stations were about a third of an inch above normal, and the Red Sandstone Plain and Southern Interior a little over half an inch deficient. Periods between snow or rain storms were notably clear, the 12th to 16th, in-

clusive particularly. Slightly over half of the precipitation of the month fell as snow and owing to high winds, the recording of a correct amount is difficult. There were six distinct snow-storms, on the 1st-2d, 6th-7th and 22d over the whole State, on the 11th in the southern counties, on the 18th over the northern half of the State, and on the 20th over the southern half of the State. The average depth of snow was about twenty inches, and was about equally distributed, except that there was slightly less over the Red Sandstone Plain than other sections. The greatest amount of snow reported was 34.2 inches at Long Branch and the least was 11.3 inches at Boonton. The greatest amount of precipitation was 6.45 inches at Charlotteburg and the least 2.02 inches at Vineland. The average number of days of measurable precipitation per station was 10.

WIND.

The prevailing wind movement during March was from the northwest with an approximate velocity of 14 miles per hour. The greatest wind velocity was 72 miles per hour from the northwest on the 1st at Long Branch. Gales were general over the whole State on the 1st and 2d, 18th and 20th. Stations which reported other prevailing directions than northwest, varied only between north and southwest.

SUNSHINE AND CLOUDINESS.

Sunshine approximated 54% of the possible amount and was slightly below normal. Averaging the whole State, there were 13 clear days, 10 partly cloudy days and 8 cloudy days. The greatest average cloudiness occurred on the coast.

MISCELLANEOUS PHENOMENA.

Sleet occurred on the 1st, 6th and 18th, over nearly all sections of the State. Lunar halos occurred on the 10th and 11th. Solar halos were very generally observed on the 12th, 14th, 21st, 27th and 31st and at some points on other dates also. A thunderstorm occurred on the 18th. An eclipse of the moon was observed on the 11th.

COMPARATIVE DATA FOR MARCH.

Year.	Temperature.			Average Precipitation.		
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.
1885	30.4	66	2	1.10	2.29	0.23
1886	37.7	70	9	3.70	5.27	2.59
1887	37.7	61	8	3.34	5.45	2.19
1888	32.8	72	0	5.71	8.22	3.75
1889	40.5	67	19	3.79	6.49	1.98
1890	37.6	78	0	6.08	7.92	4.14
1891	37.2	68	4	5.06	8.02	2.05
1892	34.4	64	6	4.75	7.21	3.11
1893	37.0	68	6	3.73	6.26	2.36
1894	44.2	83	12	1.77	2.65	1.09
1895	36.7	72	7	3.16	4.66	1.77
1896	34.0	69	-8	5.34	7.38	3.14
1897	40.0	77	8	2.78	4.32	1.55
1898	45.1	77	16	3.33	4.25	2.56
1899	38.6	73	13	6.54	9.58	3.45
1900	35.6	67	-9	3.51	4.96	2.48
1901	39.2	75	-8	4.64	8.07	2.40
1902	43.9	77	0	4.34	7.20	3.16
1903	47.6	79	13	5.13	8.53	3.60
1904	37.2	72	1	3.43	4.76	2.02
1905	39.8	87	-7	3.95	5.06	2.80
1906	34.4	62	-15	5.09	6.77	2.91
1907	41.2	88	-11	3.04	4.38	1.81
1908	41.8	89	7	2.80	4.92	1.06
1909	38.3	74	-6	3.48	4.66	2.31
1910	44.5	88	10	1.22	2.36	0.29
1911	37.6	76	3	3.38	4.50	2.64
1912	36.9	72	3	7.61	9.61	5.95
1913	44.8	79	-1	5.15	7.73	2.47
1914	35.4	75	-6	3.65	6.45	2.02

Climatological data for March, 1914.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.							Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation 40 in. or more.	Clear.	Pt. cloudy.	Cloudy.		
The Highlands and Kittatinny Valley.																				
Belvidere.....	Warren.....	289	23	35.7	-1.1	74	27	10	13	39	3.05	-0.99	.....	17.5	8	21	0	10	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	22	32.6	-2.1	70	27	3	13	35	6.45	+2.51	.....	25.0	8	20	6	5	nw.	George S. Briggs.
Culvers Lake.....	Sussex.....	848	13	.....	.....	.....	.....	1	12	.....	2.93	-0.50	0.75	27.3	12	18	6	7	w.	Brice E. Riker.
Dover.....	Morris.....	600	30	32.4	-2.5	70	27	8	13	29	3.43	-0.47	.....	28.1	10	2	21	8	.....	William C. Harris.
Layton.....	Sussex.....	550	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newton.....	Sussex.....	678	34	32.8	-3.0	70	27	8	12	29	5.61	+2.01	.....	17.0	10	12	6	13	w.	F. Vernon Losce.
Phillipsburg.....	Warren.....	363	32	36.2	-1.7	71	27	14	12	30	2.36	-1.29	0.47	16.2	9	15	8	8	n.	D. Wilson Smith.
Sussex.....	Sussex.....	442	24	33.0	-3.4	71	27	6	13	29	4.70	+1.03	1.75	12.0	8	9	5	17	nw.	George Dymock.
The Red Sandstone Plain.																				
Bayonne.....	Hudson.....	50	24	36.0	-2.0	73	27	15	21	28	2.90	-1.33	.....	17.0	8	16	7	8	n.	Erskine R. Eadie.
Bergen Point.....	Hudson.....	37	17	36.3	-1.5	73	27	15	21	27	3.82	-0.40	2.17	16.5	9	3	20	8	nw.	William H. Mitchell.
Boonton.....	Morris.....	239	24	.....	.....	.....	.....	.....	.....	.....	2.59	-1.15	1.38	11.3	12	.....	.....	.....	.....	J. W. Demmers.
Chatham.....	Morris.....	234	12	.....	.....	.....	.....	.....	.....	.....	2.87	-1.00	.....	16.5	11	.....	.....	.....	.....	M. A. Butler.
Elizabeth.....	Union.....	45	35	36.4	-2.0	75	22	12	13	32	3.97	-0.29	.....	18.0	9	10	13	8	nw.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	26	35.7	-1.8	73	27	9	13	32	3.61	0.00	0.90	22.5	10	15	8	8	nw.	Hiram E. Deats.
Highwood.....	Bergen.....	90	25	33.8	-2.4	71	27	8	13	28	3.94	-0.21	2.15	15.0	9	7	12	12	nw.	Charles J. Bates.
Jersey City.....	Hudson.....	10	15	36.9	-1.3	73	27	16	21	26	4.55	+0.45	2.81	18.1	9	7	15	9	nw.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	95	27	38.5	-0.5	74	27	13	13	34	3.45	-0.66	0.96	12.0	11	14	9	8	nw.	Samuel W. Cochran.
Little Falls.....	Passaic.....	175	11	.....	.....	.....	.....	.....	.....	.....	2.79	-1.20	1.19	14.7	9	.....	.....	.....	.....	A. Sweetman.
Mahwah.....	Bergen.....	312	12	.....	.....	.....	.....	.....	.....	.....	3.24	-1.15	0.65	22.0	13	.....	.....	.....	.....	Chas. L. Barker.
Newark.....	Essex.....	159	72	37.4	-0.1	73	27	12	2	25	2.77	-1.16	0.70	12.6	9	16	8	7	sw.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	139	61	33.8	-4.4	72	27	8	13	30	3.31	-0.60	1.20	13.6	9	14	10	7	w.	Earle C. Stillwell.
Paterson.....	Passaic.....	80	43	37.1	-1.4	75	27	15	21	31	3.31	-0.92	1.30	17.8	9	5	19	7	nw.	Heber A. Probert.
Plainfield.....	Union.....	100	28	35.8	-0.8	74	27	10	13	31	4.19	+0.38	1.80	22.9	10	10	13	8	sw.	John Neagle.
Pompton Plains.....	Morris.....	195	12	.....	.....	.....	.....	.....	.....	.....	3.51	-0.53	1.88	17.0	11	.....	.....	.....	.....	M. S. Taylor.
Somerville.....	Somerset.....	60	31	34.8	-2.1	74	27	11	11	41	3.55	-0.40	1.44	18.0	10	12	12	7	nw.	A. A. Macdonald.
South Orange.....	Essex.....	200	44	35.2	-1.6	71	27	13	21	24	4.61	+0.80	.....	19.0	9	13	11	7	nw.	Dr. W. J. Chandler.
New York, N. Y.....	.....	365	44	35.8	-1.7	70	27	14	21	21	4.55	+0.45	2.99	21.5	9	5	13	13	nw.	U. S. Weather Bureau.
The Southern Interior.																				
Bridgeton.....	Cumberland.....	30	33	37.4	-3.7	75	27	5	21	32	2.75	-1.72	0.50	19.0	10	13	6	12	w.	Henry A. Jorden.
Burlington.....	Burlington.....	12	28	35.1	.....	75	27	14	12	40	2.89	-1.19	0.92	17.3	12	19	2	10	nw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	18	37.0	-2.8	72	27	7	21	28	2.70	-1.28	.....	23.0	9	18	2	11	nw.	William T. Farley.
Haddonfield.....	Camden.....	75	27	36.9	-2.3	74	27	11	21	36	3.16	-0.73	0.66	27.5	12	8	15	8	n	Chas. F. Richardson.
Hammonton.....	Atlantic.....	103	16	.....	.....	.....	.....	.....	.....	.....	3.28	-1.09	1.30	29.0	10	.....	.....	.....	.....	Joseph E. Abbott.
Hightstown.....	Mercer.....	119	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Leon Dunbar.
Imlays-town.....	Monmouth.....	18	26	32.8	-6.9	71	27	7	13	31	5.35	+1.16	3.00	34.0	8	14	8	9	sw.	H. E. Bullock.
Indian Mills.....	Burlington.....	76	25	35.8	-4.0	75	27	0	21	40	4.26	+0.16	1.36	30.5	13	15	8	8	w.	James M. Armstrong.
Lakewood.....	Ocean.....	54	11	34.2	-4.4	74	27	6	13	32	5.94	+2.12	2.55	26.0	10	4	13	14	nw.	R. W. Holman.
Moorestown.....	Burlington.....	75	52	36.8	-2.0	74	27	9	21	34	2.78	-1.03	0.77	32.8	11	10	14	7	nw.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	7	.....	.....	.....	.....	.....	.....	.....	2.95	.....	1.15	18.4	11	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	43	35.6	-3.5	70	27	15	2	28	3.28	-0.76	1.66	18.8	10	9	11	11	w.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	21	34.1	-4.9	67	27	0	21	35	3.81	-0.58	.....	28.5	12	16	7	8	nw	Frank R. Austin.
Vineland.....	Cumberland.....	118	46	36.5	-3.8	73	27	6	21	43	2.02	-2.14	0.40	17.0	13	15	8	8	w.	Alfred Chalmers.
Woodbine.....	Cape May.....	43	23	36.8	-3.3	71	27	-4	21	37	2.63	-1.45	0.65	12.3	11	18	2	11	.....	Prof. R. D. Maltby.
Philadelphia, Pa.....	.....	117	44	38.8	-1.2	72	27	16	2	30	2.71	-0.74	0.94	15.2	12	5	16	10	nw.	U. S. Weather Bureau.
The Sea Coast.																				
Asbury Park.....	Monmouth.....	22	25	.....	.....	.....	.....	.....	.....	.....	4.75	+0.45	2.40	.....	.....	9	5	17	nw.	H. E. Denegar.
Atlantic City.....	Atlantic.....	16	41	35.0	-3.8	54	17	13	21	23	4.10	+0.37	2.13	23.6	12	8	11	12	nw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	36	36.4	-4.4	58	17	12	21	20	4.13	+0.40	0.78	19.8	11	10	11	10	nw.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	7	33.2	.....	71	27	10	21	32	5.67	.....	2.77	34.2	10	6	13	12	nw.	William D. Martin, Jr.
Means for the State.....																				

† On other dates also.

Estimated and incomplete data are not considered in means.

All other records within the State are used in determining the Section means, but the mean departures from normal temperature and precipitation are based only on records from stations that have 10 or more years of observations.

Reference letters, a, b, e, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

Daily precipitation for March, 1914.

Stations.	Day of month.																															Total.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>The Highlands and Kittatinny Valley.</i>																																	
videro.....	*	1.36				.10	.45										.03						.54						.52		.05		3.05
Charlotteburg.....	*	5.41			*	.28											.18						.07						.35		.16		6.45
Wers Lake.....	.75	.69				.12	.30	.02	T.	T.				T.			.02	.25				.09	T.				T.	.04	.57	.01	.07	T.	2.93
Per.....	*	1.80				.20	.30										.01	.36					.15				.04		.17		.10		3.43
Con.....																																	
Winton.....	*	2.88				.37	.17										.80	.33					.11	T.				.34	.60		.01		5.61
Ellipsburg.....	.41	.47				.15	.34		T.								T.	.32					.13	T.			.05		.43	T.	.06	T.	2.36
Sen.....	1.60	1.75				.25	.15											.20					.05						.58		.12		4.70
<i>The Red Sandstone Plain.</i>																																	
Ronne.....	1.58	.22				.12	.13		T.	T.								.35					.05						.40		.05		2.90
Wagon Point.....	2.17	.28				.18	.16											.40					.02				.03		.56		.02		3.82
Winton II.....		1.38	T.			.03	.26	T.		T.	T.						.02	.24	.05				.08	.03			.05		.07	.27	T.	.11	2.59
Watham II.....		* 1.30				.03	.30										.03	.40					.17				.12		.05	.37		.10	2.87
Wabath.....	*	2.45				*	.40		T.	T.							T.	.41					.18				.04		.44		.05		3.97
Wilmington.....	.90	.70				.24	.38		T.		T.							.43					.34	T.			.08		.46	.02	.06		3.61
Wthwood.....	2.02	.52	T.			.10	.14									T.	T.	.50					.10				T.		.37	.07	.12		3.94
Wsey City.....	2.70	.30				.13	.26		T.	T.							T.	.42		T.			.12	T.			.04		.49		.09		4.55
Wbertville.....	.61	.96				.25	.37				T.						.20	.44		T.			.13			T.	.02		.34	.05	.08		3.45
Wle Falls.....	1.19	.24				.32	.04										.42						.12				.03	T.	.33		.10		2.79
Wbwah II.....		.50	.65				.50										.10	.40	.15				.10	.10			.10	.07	.15	.30		.12	3.24
Wark.....	.70	.25				.26											.03	.19					.20				.21		.53		.40		2.77
W Brunswick.....	1.20	.48	T.			.40												.38		.04			.12				.04		.57		.08		3.31
Werson.....	1.30	.80				.07	.18		T.	T.						T.		.43					.10	T.			.04		.25		.14		3.31
Winfield.....	1.80	.74				.10	.24		T.	T.							.01	.40					.30				.04	T.	.53		.03		4.19
Wmpton Plains II.....	.10	1.88	.12			T.	.33										.02	.19	.22				.11	.08					T.	.38		.08	3.51
Wnerville.....	1.44	.39				.63	.27										.02	.27					.14				T.		.18	.07	.14		3.55
Wth Orange.....	* 2.90					.10	.27		T.	T.							T.	.42					.26				.16		.30	T.	.20		4.61
W York, N. Y***	2.95	.16	T.		T.	.29	.04		T.	T.					T.		T.	.42					.20				.04	T.	.40	T.	.05		4.55
<i>The Southern Interior.</i>																																	
Wdgeton.....	*	.46			.35	.40					.23						T.	.11		.50			.20				T.		.40		.10		2.75
Wdlington II.....		.92	.33			.25	.35			T.			.03					* .33	T.	.11			* .10				.02		.08	.25		.12	2.89
Wdton.....	*	.70				.40	.30				.30						T.	.30		.30			.30						.10	T.			2.70
Wdsonfield.....	.61	.66				.42	.27		T.	T.		.05						.02	.39		.16		.14				.03		.25	T.	.16		3.16
Wdmonoton.....	.30	1.30				.45	.25										.03						.20					*	*	.35		3.28	
Wdhtstown.....																																	
Wdaytown.....	.80	3.00				.35	.30										T.	.35	.05	T.			T.						.40		.10		5.35
Wdian Mills.....	.54	1.36	.08			.57	.33				.11						T.	.35	.28				.12			.11			.18	.03	.20		4.26
Wdewood.....	2.55	1.55				.45	.35			T.							T.	.24	.19				.10					.32	.10	.09		5.94	
Wdoresttown.....	.40	.77	T.			.27	.40		T.			.06						.38		.13			.13				T.		.10	.03	.11		2.78
Wdthfield.....	1.15	.20				.35	.21					.16						.23		.28			.06				.05		.08		.18		2.95
Wasantville.....	.42	.44			T.	.14	.05				.18							.23		.22			.05				.03		.06	T.	.05		
Winton***	1.35	.35			T.	.45	.14		T.	T.							T.	.37	.05		.12	T.				T.	.02	T.	.34		.09		3.28
Wderton.....	* 1.98					.26	.27		T.			.18						.20		.42			.14				.12		.11	.03	.10		3.81
Wdeland.....	.22	.30	.03			.10	.15					.30						T.	.18	.40			.15				.04	T.	.09	.03	.03		2.02
Wdobine.....	.65	.08				.43					.23							.19	.45				.08				.10		.16	.02	.24		2.63
Wdadelphia, Pa***	.81	.25			.02	.68	.02		T.			.05					.01	.35	.15				.09	T.		T.	T.	T.	.17	T.	.11		2.71
<i>The Sea Coast.</i>																																	
Wbury Park.....	2.40	.60	.40			.56			T.	T.	T.						T.	.20		T.			.30				.04		.20	.01	.04		4.75
Wantic City***	2.02	.21			.03	.47	.04		T.		.22							.28		.36			.09				.15		.09	T.	.14		4.10
Wpe May City***	.78	.48			.45	.69					.45							.14		.60			.15				.12		.09	T.	.18		4.13
Wing Branch.....	2.77	.97				.37	.24		T.	T.	T.		T.				T.	.42		.07			.21				.05		.51	T.	.06		5.67

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24 hour period, midnight to midnight.

† Precipitation measured in the morning; amount then recorded is for the preceding 24 hours.

* Precipitation included in the next following measurement.

† Separate dates of falls not recorded.

T. Trace, or less than 0.01 inch.

† Incomplete.

Daily temperatures for March, 1914.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.		
<i>The Highlands and Kittatinny Valley.</i>																																		
Belyidere.....	Maximum	45	30	44	44	44	45	44	46	34	38	34	39	42	45	60	58	59	47	40	38	36	39	45	52	57	70	74	66	43	40	61	45.6	
Belyidere.....	Minimum	30	14	20	30	27	32	29	26	18	23	18	12	10	16	21	29	35	33	26	19	14	24	20	26	26	35	42	37	35	37	25.8		
Charlotteburg.....	Maximum	44	38	36	38	43	36	41	41	38	33	30	35	34	40	51	51	50	49	37	32	39	34	41	42	48	60	70	66	40	41	50	42.8	
Charlotteburg.....	Minimum	27	12	18	26	27	28	26	29	20	20	16	10	3	5	27	21	30	28	21	13	9	19	6	24	17	49	62	70	61	40	36	22.5	
Dover.....	Maximum	..	..	34	38	40	33	41	39	31	33	29	35	37	40	55	48	52	36	33	25	33	36	40	45	49	62	70	61	40	36	55	41.6	
Dover.....	Minimum	..	12	19	28	25	28	28	29	21	21	16	11	8	11	..	25	31	21	23	12	9	21	13	26	21	35	47	36	35	32	33	23.3	
Layton.....	Maximum	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Layton.....	Minimum	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Newton.....	Maximum	40	30	37	39	40	34	40	40	32	34	31	35	36	40	52	52	53	37	35	27	35	38	43	45	51	62	70	61	40	37	56	41.8	
Newton.....	Minimum	18	20	17	28	25	26	26	28	19	20	16	8	9	15	33	32	32	32	22	14	8	20	19	24	23	35	41	34	33	30	34	23.8	
Phillipsburg.....	Maximum	41	33	41	42	41	34	43	41	34	35	33	36	40	44	58	56	55	41	35	28	35	38	41	48	58	68	71	66	43	42	60	44.6	
Phillipsburg.....	Minimum	32	14	25	31	28	28	30	32	22	24	21	14	17	19	33	31	37	30	26	18	14	23	22	29	45	50	63	71	61	40	39	27.7	
Sussex.....	Maximum	39	32	40	40	45	34	40	42	34	34	31	37	30	40	54	52	50	43	37	30	35	37	41	45	50	63	71	61	40	39	46	42.4	
Sussex.....	Minimum	29	14	20	27	23	27	26	27	13	20	15	8	6	11	34	27	34	32	23	16	9	21	17	23	22	35	45	36	34	31	31	23.7	
<i>The Red Sandstone Plain.</i>																																		
Bayonne.....	Maximum	38	34	41	42	43	35	41	41	35	36	31	32	38	45	55	48	53	42	37	33	34	34	44	46	48	65	73	65	44	39	55	43.5	
Bayonne.....	Minimum	32	16	25	30	25	30	30	30	23	23	24	17	18	22	38	31	33	34	27	20	15	24	25	30	29	49	66	73	65	38	39	28.4	
Bergen Point.....	Maximum	40	37	41	42	41	35	41	42	37	36	31	34	38	44	55	50	53	42	37	32	34	35	45	46	49	66	73	65	38	36	34	28.3	
Bergen Point.....	Minimum	26	16	25	30	25	31	30	29	22	22	24	18	22	36	34	34	34	28	20	15	24	24	28	29	41	67	75	66	44	40	59	46.1	
Elizabeth.....	Maximum	41	34	44	45	45	37	42	43	36	38	34	39	42	45	59	52	58	43	39	33	36	40	45	49	56	66	73	65	41	40	59	45.6	
Elizabeth.....	Minimum	31	16	24	29	20	30	31	28	21	20	20	16	12	16	34	29	33	33	28	21	14	24	20	27	53	66	73	65	41	40	59	45.6	
Flemington.....	Maximum	39	33	42	42	40	35	44	43	38	38	34	40	41	41	59	50	59	50	37	33	36	43	45	50	57	66	73	65	41	40	59	45.6	
Flemington.....	Minimum	28	15	21	31	14	30	30	29	20	22	16	15	9	12	32	27	34	32	27	20	13	24	20	29	26	61	71	63	43	38	54	42.7	
Highwood.....	Maximum	38	34	40	40	40	36	38	41	36	35	32	34	36	40	53	50	50	45	39	33	34	33	42	45	49	61	71	63	43	38	54	42.7	
Highwood.....	Minimum	32	12	24	21	28	29	28	21	20	18	12	8	12	26	29	30	30	26	20	11	23	18	25	24	36	44	44	36	35	32	30	24.8	
Jersey City.....	Maximum	38	32	43	43	42	37	40	41	35	36	32	33	40	43	57	51	56	48	38	32	38	36	45	47	48	61	73	64	44	38	57	44.1	
Jersey City.....	Minimum	31	17	25	31	29	31	32	31	25	24	26	18	21	25	36	35	36	35	28	20	16	25	27	31	32	41	47	38	37	35	36	29.7	
Lambertville.....	Maximum	43	35	44	45	44	39	40	45	39	40	37	40	45	57	61	60	63	55	46	37	39	43	47	49	52	66	74	68	43	42	63	48.5	
Lambertville.....	Minimum	34	15	19	36	18	29	31	31	20	23	22	17	13	13	36	30	35	33	28	22	15	25	24	29	27	52	61	39	37	35	36	28.5	
Newark.....	Maximum	37	34	43	44	45	39	42	42	35	36	34	39	39	47	61	56	56	56	50	41	35	35	45	45	51	51	62	73	65	45	39	55	45.6
Newark.....	Minimum	32	12	24	32	32	27	32	30	24	22	24	17	20	26	36	32	37	34	27	20	15	24	31	32	32	42	50	39	35	33	35	29.3	
New Brunswick.....	Maximum	34	26	41	40	38	34	41	39	32	34	30	32	38	42	51	55	53	40	33	28	30	33	42	44	50	64	72	59	40	37	54	41.5	
New Brunswick.....	Minimum	18	15	26	30	22	29	30	28	21	23	20	17	8	18	35	32	34	29	27	15	9	22	19	45	48	57	69	47	36	35	32	26.0	
New Brunswick.....	Maximum	40	35	44	44	45	38	42	44	39	38	33	37	42	45	60	54	58	46	40	34	36	39	45	49	58	67	75	68	43	41	57	46.1	
Paterson.....	Maximum	32	17	24	31	30	30	30	31	24	24	23	17	17	22	35	30	34	33	26	20	15	24	21	30	27	38	46	37	36	33	34	28.1	
Paterson.....	Minimum	32	17	24	31	30	30	30	31	24	24	23	17	17	22	35	30	34	33	26	20	15	24	21	30	27	38	46	37	36	33	34	28.1	
Plainfield.....	Maximum	37	30	44	45	44	37	44	43	36	38	33	37	41	44	58	52	56	42	39	31	36	38	45	49	54	66	74	62	43	39	58	44.9	
Plainfield.....	Minimum	30	15	22	31	23	30	31	28	19	21	20	11	10	16	33	30	33	33	27	20	13	24	19	28	27	39	46	38	36	36	35	26.8	
Somerville.....	Maximum	41	33	43	43	42	38	44	43	35	37	33	36	39	41	56	49	55	41	42	34	36	37	47	49	54	67	76	64	41	38	54	45.2	
Somerville.....	Minimum	31	15	21	31	14	30	29	19	21	11	15	16	11	15	24	29	30	28	19	11	23	17	26	25	36	41	48	38	36	33	34	24.5	
South Orange.....	Maximum	35	26	40	42	40	36	40	40	34	35	32	33	39	42	55	49	52	47	37	30	33	35	43	45	50	63	71	61	43	39	54	42.6	
South Orange.....	Minimum	26	16	23	31	24	30	31	32	24	22	24	17	15	20	35	34	34	34	27	16	13	24	21	29	28	40	48	38	36	33	36	27.8	
New York, N. Y.....	Maximum	41	26	40	43	41	38	40	40	34	35	31	34	38	43	56	53	53	45	37	30	34	34	43	45	47	62	70	58	42	40	53	42.8	
New York, N. Y.....	Minimum	21	16	25	31	30	30	30	29	24	23	23	17	21	28	36	37	38	32	27	15	14	22	25	32	35	44	50	37	35	33	37	28.9	
<i>The Southern Interior.</i>																																		
Bridgeton.....	Maximum	40	35	44	47	38	35	40	45	40																								

THE STORM OF MARCH FIRST.

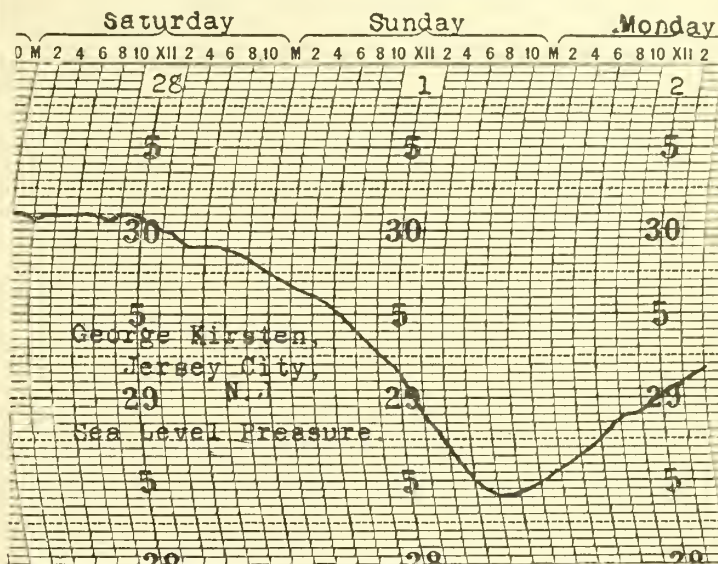
On Sunday March 1, 1914 one of the most remarkable storms that ever befell New Jersey occurred. A typical cyclonic disturbance (area low pressure) moved northward over the ocean to the eastward of the Jersey coast. The center of this cyclone lay off southern Maryland at 8 a. m. March 1st, and northeasterly winds prevailed over the northern portion of the State and southeasterly winds in southern sections. Rain began shortly after midnight at Cape May and about 2 to 3 a. m. progressively along the coast to the northward. As the center of the cyclone advanced to the northerly and northeasterly, the wind hauled more to the northerly over the whole State during

the forenoon, with the temperature passing from slightly above freezing along the coast to below freezing. The rain changed to snow in the vicinity of New York Bay between 8 and 9 a. m. and between 10 and 10:30 a. m. the snow storm, with great completeness, swept the whole State, except portions of the counties along Delaware Bay. The barometer was falling at an alarming rate, more than a quarter of an inch per two hours, and actually decreased an inch in nine hours from 8 a. m. to 5 p. m., at Jersey City and the same amount in ten hours at Long Branch. The lowest readings of the barometer showed great unanimity; 28.40 inches at Paterson, Jersey City, Elizabeth and Long Branch, and is probably about the lowest occurrence in this State. The lowest pressure of the whole storm was 28.25



March 1, 1914. Approximate position of Isobars over New Jersey at 8 P. M.

BAROGRAPH TRACE, JERSEY CITY.



inches at New Haven, Connecticut at 9 p. m. of the 1st. (This would correspond approximately to normal pressure at an altitude of 1540 feet above sea-level.

The significant material features of the storm were the continuous gale, and the rain turning to snow and then freezing. Later, on the 2d and preceding night, there was a great fall of dry snow which the gale heaped in drifts. The result was a sight spectacular in the extreme. Hardly was a single overhead wire able to withstand the strain of the coat of ice and stress of the wind. A few lines which lay with the wind did not go down. The great telegraph system which crosses the State from southwest to northeast directly opposed the gale, and the poles snapped under the enormous strain for miles on end. Thus was the main artery of wire communication between New York, Philadelphia and Washington destroyed. Except for under-ground telephone circuits no electrical communication would have been available. Another serious effect of the storm was the destruction of fire-alarm systems, and the falling of high voltage service wires.

By nightfall of the first there was nearly a total prostration of electrical business over the whole State, the least severe conditions prevailing in the southwest counties. The falling poles and entangling wires blocked highways and stalled rail traffic,

City street cars were halted and deserted at odd points. Steam and interurban cars were stalled remote from stations, and passengers forced to remain entrained all night. Urban milk supply was greatly interrupted by wires, poles and drifts obstructing rural highways.

As an instance of the extreme strain put upon poles and wires, an ordinary telephone wire a foot long was encrusted with one and quarter pounds of ice and snow. This would amount to a hundred pounds per wire on each pole, and if a hundred wires were strung on each pole, which is not unusual, the weight would amount to five tons. But this does not contain even an inkling of the breaking strain caused by a lateral stress of forty to seventy miles per hour gale.

There were few lives lost, but stock were less fortunate, over thirty head being killed in the collapse of a barn in Sussex County near Branchville. Shrubs and foilage trees were badly

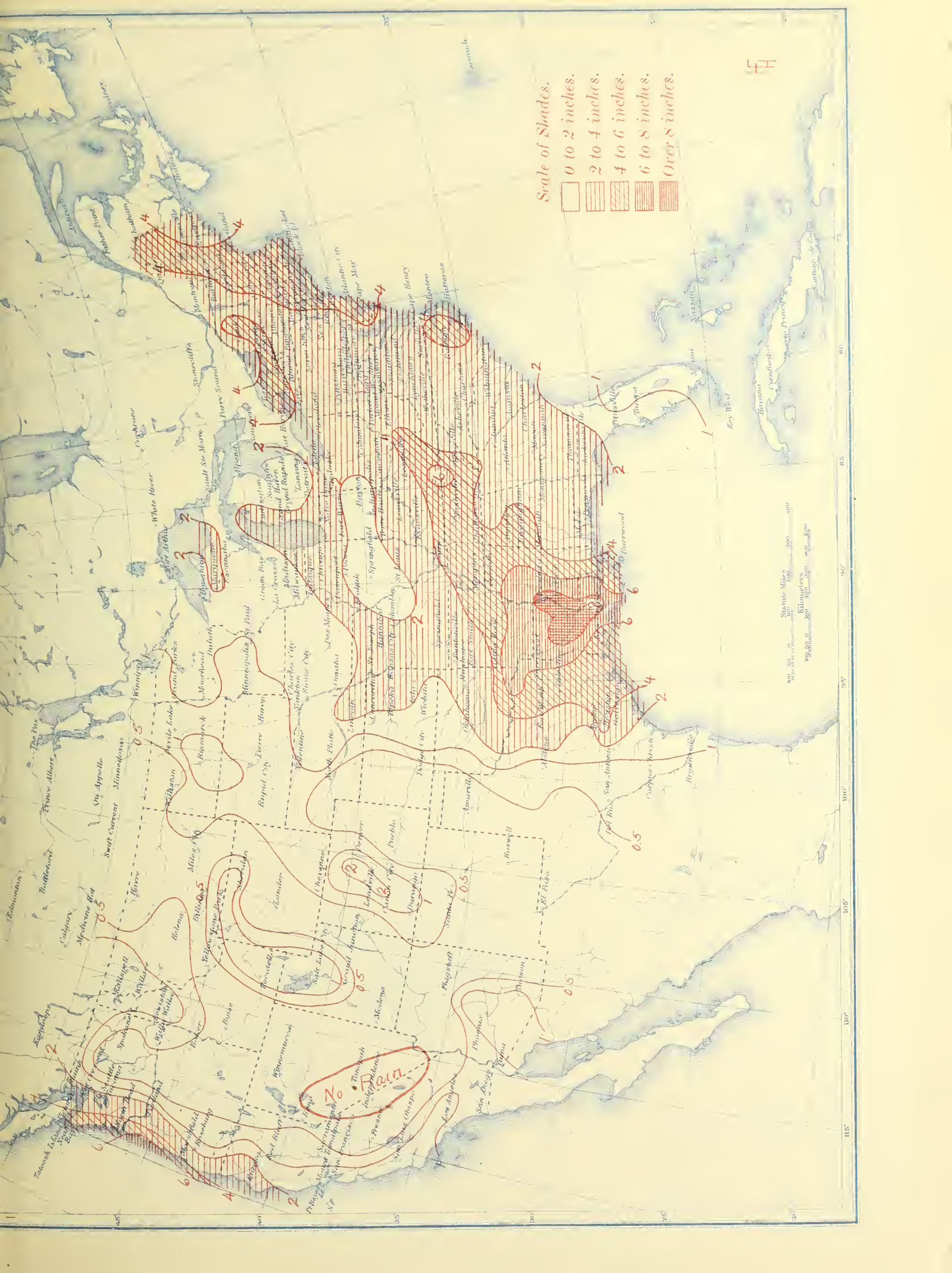
torn except where some proction was afforded.

On the whole the storm did surprisingly little damage other than that resulting from interruption of electrical service, and it illustrated in a manner never before so completely shown, how dependent present day conditions are upon electricity.

A daily newspaper in Plainfield was forced to issue a sheet no larger than about eight by twelve inches, printed on one side only, and another used motor cycles for power to run linotype machines.

The principle serious economic loss falls first on telegraph and telephone companies, and finally on the entire population.

Storm and cold wave warnings were disseminated by the Weather Bureau in advance of the storm, but the day being Sunday and the storm of such a nature that precautionary measures were of but moderate benefit.



Scale of Shades.

[White Box]	0 to 2 inches.
[Horizontal Lines]	2 to 4 inches.
[Diagonal Lines (TL to BR)]	4 to 6 inches.
[Diagonal Lines (BL to TR)]	6 to 8 inches.
[Cross-hatch]	Over 8 inches.

Scale of Miles
0 100 200 300 400
Kilometers
0 100 200 300 400

ff

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.				Moist- ure.	Sun- shine.
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, percentage.	Percentage of possible sunshine.
							Miles per hour.	Direction.	Date.		
Atlantic City.....	30.05	30.57	25	28.76	1	9	29	NE.	29	78	58
Asbury Park.....	30.01	30.59	25	28.58	1	.....	72	NE.	1	.....	.....
Cape May.....	30.07	30.57	25	28.97	1	10	42	NW.	1	82	.....
Jersey City.....	29.98	30.52	25	28.40	1	.....	.....	.....	.....	.....	53
Long Branch.....	30.01	30.52	21	28.40	1	18	72	NW.	1	74	.....
Newark.....	.....	.....	.....	.....	.....	.....	40	NE.	1	63	.....
New York, N. Y.....	30.00	30.52	21	28.38	1	19	84	NW.	1	66	52
Philadelphia, Pa.....	30.04	30.56	21	28.80	1	12	45	NW.	2	74	54
Trenton.....	30.01	30.53	25	28.66	1	13	58	NW.	1	74	53

U. S. DEPARTMENT OF AGRICULTURE

WEATHER BUREAU

CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

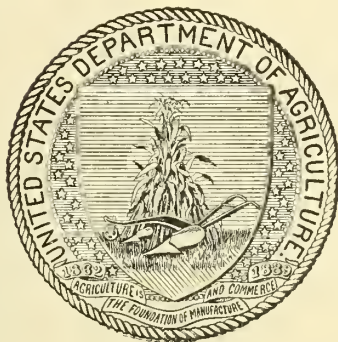
NEW JERSEY SECTION

APRIL, 1914

BY

G. HAROLD NOYES

SECTION DIRECTOR



PHILADELPHIA, PA.
WEATHER BUREAU OFFICE
MAY 21, 1914.



Scale of Sheets.

- 0 to 2 inches.
- 2 to 4 inches.
- 4 to 6 inches.
- 6 to 8 inches.
- Over 8 inches.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Section Director.

VOL. XXVII. TREXTON, N. J., APRIL, 1914. No. 4.

GENERAL SUMMARY.

The rigors of winter gradually relented during April and vegetable and animal life emerged from winter quarters somewhat earlier than usual. Snow was almost entirely absent, but cool nights and frosts continued to delay outdoor progress. There were but five periods during the month that might be termed pleasant in temperature, and but one that was mild; this occurred from the 17th to the 20th. But as opposed to this, there were six cool waves, of longer duration than the warmth, and of greater potency. The coldest period was from the 3d to the 6th, the lowest readings at nearly all stations being on the 4th, ranging from 15° to 28°. The warm wave was from the 17th to the 20th, and the warmest day was the 19th with readings ranging from 66° to 89°. Except from the 17th to the 20th, the warm weather occurred with rainstorms and the air weather was cold. The principal storms of the month were on the 2nd, 15th, 20th, and 25th-26th. The last rainstorm, just following the occurrence of the highest pressure of the month, on the 24th, was in excess of an inch over the entire State. On the 15th northeast gales of hurricane force on the coast were the cause of the wreck of a three mast schooner on the beach at Long Branch, and the attending loss of eight lives. Rainfall was very evenly distributed over the state, the areas of greatest rain being above normal, and the driest counties, Mercer and adjoining sections being below normal. In but few instances at any station were there more than two successive days without rain. Thunder and lightning attended the rain on the 8th over practically the entire State. Taking the weather conditions of the month, detached from February and March, it was about what usually occurs in April. But as February and March were cold, the Spring season was retarded.

TEMPERATURE.

The monthly mean temperature for the State was 48.4°, which was 0.7° below normal. The northern counties and seacoast stations were about a degree and a half colder than the remainder of the State. The highest temperature occurred at Moorestown, and the lowest in Sussex County. On the 19th, temperatures over the greater portion of the State were fifteen to twenty degrees above normal. The coldest day, the 4th, was but little more than ten degrees below normal. The greatest subnormal temperature departures occurred over portions of Sussex, Middlesex and Monmouth Counties, and the very small area above normal in heat was in the Delaware Valley, just above and below Mercer County. The warm periods were the 1st-2d, 7th-8th, 12th, 17th-20th, 22d, 27th and 29th. The cold days were the 3d-6th, 9th-11th, 13th-16th, 24th, 25th and 30th.

PRECIPITATION.

The average rainfall, (there was but a fraction of an inch of

snow, in Sussex and Warren Counties) was 3.67 inches, which was 0.18 inch above normal. The Highlands and Kittatinny Valley was 0.70 inch above normal; the Red Sandstone Plain 0.06 inch above; the Southern Interior 0.09 inch above; and the Sea Coast was 0.04 inch below normal. The greatest amount of rain, 4.78 inches, fell at Charlotteburg, and the least, 2.35 inches, at Lambertville, and this shows how little difference there was in the variation of rainfall over the State as a whole. The days on which no rain fell throughout the State were the 6th, 10th, 11th, 13th, 14th, 18th, 19th and 24th. The average number of days on which measurable amounts of rain fell was eleven.

WIND.

The prevailing wind movement was from the northwest, with an approximate velocity of 14 miles per hour, which is somewhat higher than usual. The greatest velocity, for a five minute period, was 88 miles per hour from the northeast on the 15th in the vicinity of Asbury Park and Long Branch. Strong winds to strong gales prevailed over other portions of the State on the 2d, 8th, 11th, 12th, 19th, 20th, 23d and 29th.

SUNSHINE AND CLOUDINESS.

Sunshine approximated 55% of the possible amount, which is slightly less than the usual amount. Averaging the whole State, there were 13 clear, 7 partly cloudy and 10 cloudy days. The greatest amount of cloudiness occurred along the coast, and the largest number of clear days was reported along the Delaware valley.

MISCELLANEOUS PHENOMENA.

Thunderstorms were very generally reported on the 8th, and there were also scattered occurrences on the 15th, 22d, 26th and 29th. Scattered snow flurries occurred in the Highlands on the 4th and 5th. Solar halos were observed generally on the 7th and 14th. Lunar halos were visible on the 4th and 7th. The principal occurrences of frost were on the 6th, 10th, 11th, 13th, 14th and 24th.

COMPARATIVE DATA FOR APRIL.

Year.	Temperature.			Average Precipitation.		
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.
1885.....	48.4	88	26	2.79	2.86	0.89
1886.....	50.6	86	27	3.40	5.48	1.86
1887.....	47.3	87	16	2.70	3.77	0.91
1888.....	47.9	92	22	3.28	4.68	1.89
1889.....	51.2	83	25	5.32	7.25	2.92
1890.....	50.4	86	21	2.65	4.58	1.89
1891.....	52.0	88	20	2.19	3.80	1.39
1892.....	49.3	87	19	2.49	4.41	1.05
1893.....	49.2	82	19	5.21	7.12	2.97
1894.....	50.3	88	10	3.09	4.86	1.71
1895.....	49.1	89	19	4.88	7.75	3.47
1896.....	52.4	98	12	1.35	2.30	0.64
1897.....	50.4	89	19	3.79	6.98	2.17
1898.....	47.8	81	13	3.74	4.94	2.17
1899.....	49.9	88	18	1.73	3.25	0.48
1900.....	50.8	82	18	2.29	3.03	1.59
1901.....	48.3	89	23	6.31	10.22	3.46
1902.....	50.2	93	20	3.62	5.99	2.45
1903.....	50.9	92	18	3.97	7.03	2.40
1904.....	46.7	85	16	3.42	4.71	2.00
1905.....	49.9	84	18	2.88	4.03	1.53
1906.....	51.2	87	17	3.64	6.42	1.17
1907.....	45.2	83	19	3.78	8.67	2.06
1908.....	51.2	93	13	2.72	3.86	1.42
1909.....	50.2	88	17	5.97	8.90	3.84
1910.....	53.5	88	20	5.84	7.56	3.43
1911.....	47.4	88	14	4.11	5.58	2.87
1912.....	50.4	82	18	3.56	6.02	1.81
1913.....	52.1	89	19	5.78	8.53	4.14
1914.....	48.4	89	15	3.68	4.78	2.35

Climatological data for April, 1914.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation, .01 in. or more.	Clear.	Pt. cloudy.			Cloudy.
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	23	48.8	-0.8	85	19	22	4	35	4.14	+0.87	.....	0	12	18	1	11	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	22	46.4	-0.3	81	19	16	4	37	4.78	+0.85	.....	T.	13	15	8	7	nw.	George S. Briggs.
Culvers Lake.....	Sussex.....	848	13	.....	.....	.....	.....	15	4	.....	4.19	+0.32	1.31	0.8	16	15	7	8	w.	Brice E. Riker.
Dover.....	Morris.....	600	30	45.3	-2.0	82	19	19	4	40	3.72	+0.21	1.45	0	12	3	17	10	.....	William C. Harris.
Layton.....	Sussex.....	550	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. A. A. Ranson.
Newton.....	Sussex.....	678	34	45.4	-2.2	82	19	20	4	38	4.49	+1.28	1.20	0	14	8	3	19	n.	F. Vernon Losee.
Phillipsburg.....	Warren.....	363	32	49.8	+0.2	84	19	25	†4	38	3.19	+0.17	1.08	0	13	17	4	9	nw.	D. Wilson Smith.
Sussex.....	Sussex.....	442	24	46.4	-1.9	82	19	20	4	39	4.48	+1.23	1.08	0.5	12	12	5	13	nw.	George Dymock.
Means and extremes.....				47.0	-1.2	85	19	15	4	40	4.14	+0.70	1.45	0.2	13	13	6	11	nw.	
<i>The Red Sandstone Plain.</i>																				
Bayonne.....	Hudson.....	50	24	48.4	-0.6	83	19	26	4	31	3.35	-0.33	1.43	0	12	14	4	12	n.	Erskine R. Eadie.
Bergen Point.....	Hudson.....	37	17	.....	.....	82	19	28	6	.....	4.35	+0.46	1.38	0	8	6	16	8	se.	William H. Mitchell.
Boonton.....	Morris.....	239	24	.....	.....	.....	.....	.....	.....	.....	3.67	-0.09	1.62	T.	11	.....	.....	.....	.....	J. W. Demmers.
Chatham.....	Morris.....	234	12	.....	.....	.....	.....	.....	.....	.....	4.40	+0.75	1.58	0	12	.....	.....	.....	.....	M. A. Butler.
Elizabeth.....	Union.....	45	35	49.2	-1.6	84	19	22	4	40	3.93	+0.36	1.90	T.	11	9	14	7	nw.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	26	49.6	+0.5	81	19	24	6	35	3.10	-0.34	1.29	0	14	16	4	10	sw.	Hiram E. Deats.
Highwood.....	Bergen.....	90	25	47.2	-1.3	82	19	21	6	36	3.66	+0.27	1.28	T.	13	9	8	13	w.	Charles J. Bates.
Jersey City.....	Hudson.....	10	15	48.7	-0.7	83	19	27	4	31	3.72	+0.02	1.90	T.	12	11	6	13	nw.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	95	27	51.6	+1.2	82	19	25	6	34	2.35	-1.05	1.10	0	9	13	10	7	sw.	Samuel W. Cochran.
Little Falls.....	Passaic.....	175	11	.....	.....	.....	.....	.....	.....	.....	3.57	+0.03	1.10	0	12	.....	.....	.....	.....	A. Sweetman.
Mahwah.....	Bergen.....	312	12	.....	.....	.....	.....	.....	.....	.....	4.46	+0.99	1.40	0	9	.....	.....	.....	.....	Chas. L. Barker.
Newark.....	Essex.....	159	72	48.7	-0.4	83	19	26	4	34	4.09	+0.36	1.80	T.	12	13	6	11	sw.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	139	61	46.6	-3.1	82	19	22	4	32	3.00	-0.79	1.53	0	9	15	4	11	nw.	Earle C. Stillwell.
Paterson.....	Passaic.....	80	43	49.7	-0.6	85	19	26	†4	38	3.62	+0.13	1.47	T.	13	9	11	10	s.	Heber A. Probert.
Plainfield.....	Union.....	100	28	49.0	+0.8	83	19	22	4	38	3.74	-0.16	1.09	0	9	9	10	11	nw.	John Neagle.
Pompton Plains.....	Morris.....	195	12	.....	.....	.....	.....	.....	.....	.....	4.25	+0.69	1.64	0	10	.....	.....	.....	.....	M. S. Taylor
Somerville.....	Somerset.....	60	31	48.9	+0.2	82	19	21	4	40	2.74	-0.81	1.31	0	9	12	7	11	nw.	A. A. Macdonald.
South Orange.....	Essex.....	200	44	47.9	-0.4	80	19	25	4	32	4.02	+0.53	1.80	T.	11	11	8	11	nw.	Dr. W. J. Chandler.
New York, N. Y.....		365	44	46.6	-1.5	78	19	26	4	25	2.67	-0.63	1.59	T.	12	7	7	16	nw.	U. S. Weather Bureau.
Means and extremes.....				48.8	-0.5	85	19	21	†4	40	3.67	+0.06	1.90	0	11	11	8	11	nw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	33	51.3	-0.5	83	19	25	†4	41	4.21	+0.78	2.05	0	10	13	5	12	w.	Henry A. Jorden.
Burlington.....	Burlington.....	12	28	48.6	.....	83	19	25	†6	45	3.26	-0.11	1.28	0	8	20	4	6	nw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	William T. Farley.
Haddonfield.....	Camden.....	75	27	49.9	-0.9	82	19	23	6	40	4.05	+0.95	1.67	0	11	7	15	8	nw.	Chas. F. Richardson.
Hammonton.....	Atlantic.....	103	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Joseph E. Abbott.
Hightstown.....	Mercer.....	135	22	.....	.....	83	19	.....	.....	38	.....	.....	1.35	0	.....	.....	.....	.....	.....	Leon Dunbar.
Inlaystown.....	Monmouth.....	18	26	47.7	-2.9	84	19	20	4	38	2.88	-0.62	1.59	0	9	18	3	9	nw.	H. E. Bullock.
Indian Mills.....	Burlington.....	76	25	49.6	-0.7	84	19	18	6	42	3.31	+0.18	1.59	0	12	12	11	7	nw.	James M. Armstrong.
Lakewood.....	Ocean.....	54	11	48.2	-0.7	84	19	21	4	39	3.70	+0.09	1.39	T.	9	9	6	15	sw.	R. W. Holman.
Moorestown.....	Burlington.....	75	52	51.2	+1.2	89	19	23	†4	38	3.19	0.00	1.59	0	11	14	10	6	w.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	7	.....	.....	.....	.....	.....	.....	.....	3.24	.....	1.50	.....	10	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	16	.....	.....	.....	.....	.....	.....	.....	3.48	-0.04	1.74	0	9	21	4	5	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	43	48.5	-1.3	80	19	27	4	29	2.57	-0.72	1.28	0	9	9	8	13	nw.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	21	47.8	-0.1	80	22	19	6	42	4.31	+0.52	1.95	0	10	15	11	4	nw.	Frank R. Austin.
Vineland.....	Cumberland.....	118	46	50.4	-0.3	81	29	25	4	42	3.23	-0.11	1.91	0	10	16	9	5	nw.	Alfred Chalmers.
Woodbine.....	Cape May.....	43	23	49.4	-0.1	79	†19	21	4	42	3.72	+0.14	1.72	0	10	19	4	7	.....	Prof. R. D. Maltby.
Philadelphia, Pa.....		117	44	51.0	+0.2	77	22	30	4	32	3.43	+0.52	1.81	0	8	8	8	14	nw.	U. S. Weather Bureau.
Means and extremes.....				49.3	-0.6	89	19	18	6	45	3.47	+0.09	2.05	0	10	14	8	8	nw.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	25	46.4	-1.7	76	19	25	4	31	.....	.....	.....	0	9	10	5	15	nw.	H. E. Denegar.
Atlantic City.....	Atlantic.....	16	41	47.0	-0.6	66	17	27	4	28	2.96	-0.03	1.60	0	8	11	3	16	nw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	36	48.5	+0.1	69	22	28	4	23	2.95	-0.04	0.68	0	11	11	9	10	nw.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	7	45.6	.....	85	19	25	4	37	4.46	.....	2.12	0	11	10	4	16	s.	William D. Martin, Jr.
Means and extremes.....				46.9	-0.7	85	19	25	4	37	3.46	-0.04	2.12	0	10	11	5	14	nw.	
Means for the State.....				48.4	-0.7	89	19	15	4	45	3.67	+0.18	2.12	0	11	13	7	10	nw.	

† On other dates also.

Estimated and incomplete data are not considered in means.

All other records within the State are used in determining the Section means, but the mean departures from normal temperature and precipitation are based only on records from stations that have 10 or more years of observations.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

Daily precipitation for April, 1914.

Stations.	Day of month.																															Total.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>The Highlands and Kittatinny Valley.</i>																																	
Belvidere.....	*	.20			*			.82				.15			.38	.23				.79	.07	*				*	1.50						4.14
Charlotteburg.....	*	.43			.10		T.	* 1.11				.20			* .80					.21		.10				* 1.73		T.		.10		4.78	
Culvers Lake.....	.22	.12	T.	T.	.10		.06	.82	.07			.11			.11	.34	T.			.53	.03	.05				.25	1.31		T.	.02	.05	4.19	
Dover.....	.33				.09			.95				†			†	.55				.18		.05				*	1.45			.03	.09	3.72	
Layton.....																																	
Newton.....	.25	.08			.01		.04	.87				.20			*	.88				*	.57	.06				.25	1.20				.08	4.49	
Phillipsburg.....	.19	.11			.02		T.	.46	.19			.12			.15	.28				.47	T.	.04				.06	1.05				.05	3.19	
Sussex.....	.40				.05		.08	1.07				.15			.05	.26				.63						.45	1.08			.15	.11	4.48	
<i>The Red Sandstone Plain.</i>																																	
Bayonne.....	.21	T.			.01		T.	.26	.01			.03			.53	.12	T.		.33	T.	.10					.30	1.43				.02	3.35	
Bergen Point.....	.22				T.			1.10							.67	.19			.28		.09					.42	1.38	T.	T.	T.		4.35	
Boonton II.....		.37	T.			.07	T.	.01	.51			.10				.53	.01			.31	.03					1.62	.11					3.67	
Chatham II.....		.35			.03			.02	.60			.06				.90	.23			.45		.13				1.20	.38				.05	4.10	
Elizabeth.....	*	.35			T.		T.	*	.37			.05			*	.86				.26		.05				*	1.95		T.	T.	.04	3.93	
Flemington.....	.30	.16			.02		T.	.28	.21			.06			.16	.29			.13	.02	.05					.11	1.29		T.		.02	3.10	
Hightwood.....	.30	.10			T.		T.	.27	.27			.07			.44	.37			.24	.04	.01					.22	1.28		T.	T.	.05	3.66	
Jersey City.....	.23	T.			.01		T.	.28			T.	.04			.38	.49			.28		.03					.29	1.61		T.	.06	.02	3.72	
Lambertville.....	.19				.11			.24	T.			.11			.16	.20			.15		T.					.09	1.10					2.35	
Little Falls**.....	.26	T.			.05			.44			.02	.04			.77	.18			.20	.04						.45	1.10				.02	3.57	
Mahwah II.....		.65				.10		.07	.47			.14				.90				.50							1.40	.23				4.46	
Newark**.....	.32	.02			.03		.01	.38							.34	.68			.41		.06					.60	1.20		T.		.04	4.09	
New Brunswick**.....	.41				T.			.32				.02			.38	.16			.22		.06					.65	.78		T.	T.		3.00	
Paterson.....	.26	.05	T.				T.	.18	.19			.07			.37	.38			.28		.04					.28	1.47		T.	T.	.01	3.62	
Plainfield**.....	.42	T.			T.		T.	.49			T.	.03			.42	.20			.38		.01					.70	1.09		T.	T.	T.	3.74	
Pompton Plains II.....		.58				.06		.04	.52			.05				.72	.03			.45							1.64	.16				4.25	
Somerville.....	.31			T.				.13	.29						.19	.25			.12	.01	T.					.13	1.31		T.			2.74	
South Orange.....	.30	T.			T.		T.	*	.65			.04			*	.86			.26		.03					.10	1.70		T.	.02	.06	4.02	
New York, N. Y***.....	.14	T.			.01		T.	.13			T.	.04			.47	.12			.08		.04					.47	1.12		T.	.04	.01	2.67	
<i>The Southern Interior.</i>																																	
Bridgeton.....	.32		.05					.70				.02			.24	.08			.48							.25	2.05				.02	4.21	
Burlington II.....		.38						.73				.03				.43	.05			.18		T.				.128	.18	T.				3.26	
Clayton.....															.45	.18	T.			.37	.03	.01	T.			.28	1.67		T.		T.	4.05	
Haddonfield.....	.34	.03	T.		T.			.68	.01			T.																					
Hammonton.....																																	
Hightstown.....												.06			*	.37	T.		.19	T.	T.					.11	1.24	T.					
Inlaytown.....	.10	.03					T.	.70			T.				.40	.20			.25		T.					.15	1.00	.05				2.88	
Indian Mills.....	.31		.02		T.			.10	.63			.04			.33	.10			.11							.03	1.59		.03		.02	3.31	
Lakewood.....	.12	T.			T.			T.	.50			.04			1.04	.26			.07		T.	T.				.24	1.39				.04	3.70	
Moorestown.....	.25	.02						.55	.04			.04			.35	.15	.01		.20	.03						.08	1.51					3.19	
Northfield.....	.22	.05	T.					.45							.56	.02			.12							.13	1.50	.15			.04	3.24	
Pleasantville.....	.18	.05						.39	.10						.66	.03			.09							.12	1.74	.09	T.	T.	.03	3.48	
Trenton***.....	.37	T.			T.		T.	.45				.03			.17	.15			.11		.01					.63	.65		T.	T.	T.	2.57	
Tuckerton.....	.29		.02					.87				.02			.75	.18			.13							.25	1.70		T.		.10	4.31	
Vineland.....	.36	.12	T.				*	.18				.02			.18	.16			.15							*	1.91	.16			.01	3.23	
Woodbine.....	.27	.08	.03					.43							.63	.05			.28							.16	1.72				.07	3.72	
Philadelphia, Pa***.....	.29	T.	.01		T.			.56			T.				.44	.05	T.		.27		T.					1.17	.64		T.		T.	3.43	
<i>The Sea Coast.</i>																																	
Asbury Park**.....	.08				T.			.55				.05			†.18	.12				.02		.01				.19	1.20		T.		T.	.....	
Atlantic City***.....	.19		T.					.38			T.				.64	T.			.05		T.					.41	1.26		T.	.02	.01	2.96	
Cape May City***.....	.21		.16					.43	.05						.62	.02			.20							.36	.68		T.	.17	.05	2.95	
Long Branch.....	.18	.01			T.			.54	.18			.05			1.07	.21	T.		.03	.01	.03	.01				.40	1.72		T.		.02	4.46	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24 hour period, midnight to midnight.

|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. † Separate dates of falls not recorded. ‡ Incomplete.

* Precipitation included in the next following measurement. ** Precipitation for 24 hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

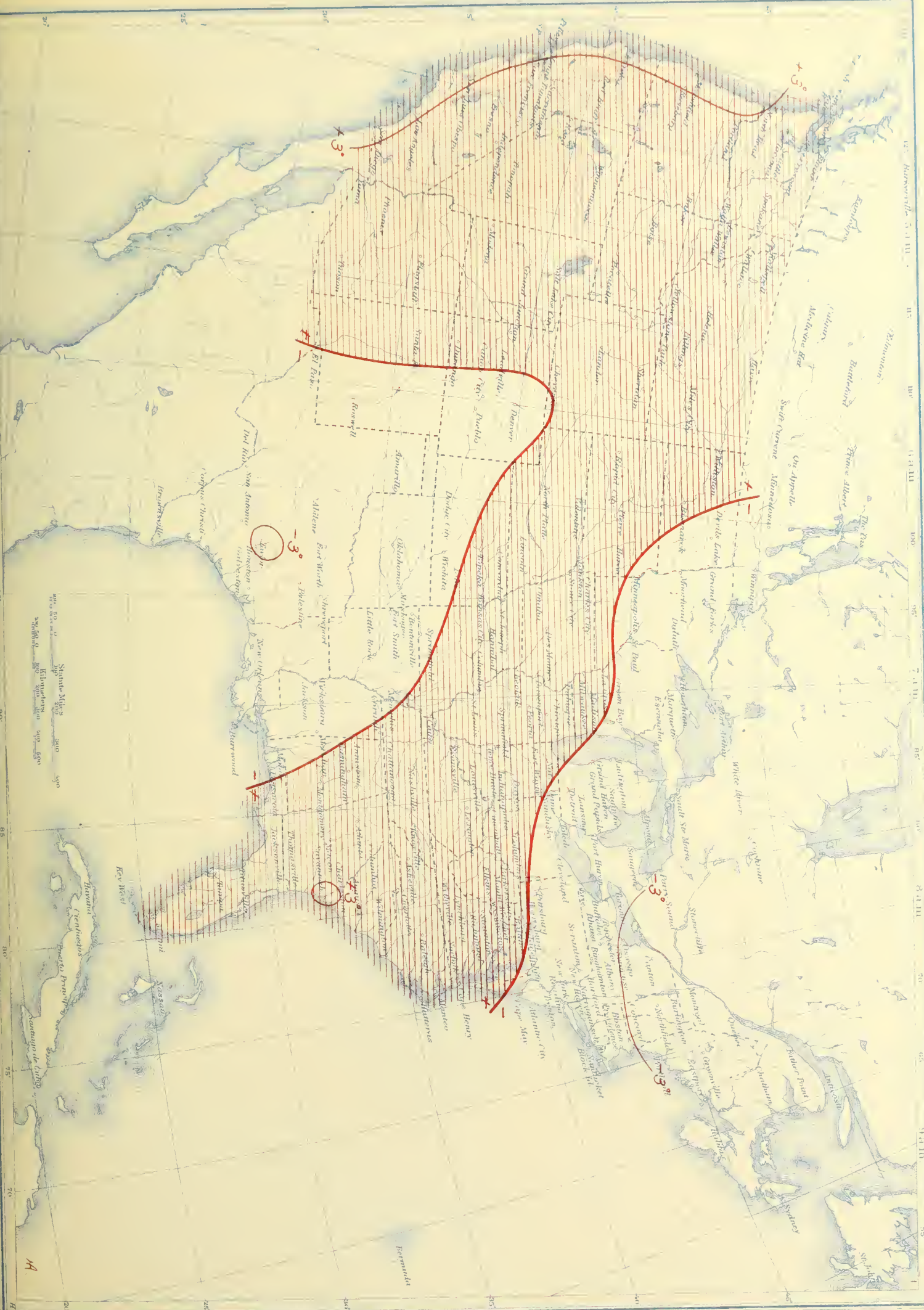
MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.			Moisture.	Sunshine.	
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, percentage.	Percentage of possible sunshine.
							Miles per hour.	Direction.	Date.		
Atlantic City.....	30.06	30.45	24	29.54	20	9	30	s. ne.	8	79	60
Asbury Park.....	30.05	30.45	24	29.55	20	.....	32	e.	15	78	.....
Cape May.....	30.06	30.46	24	29.66	15	10	40	.....	.....	.....	53
Jersey City.....	30.04	30.41	24	29.44	2	.....	.....	ne.	15	72	.....
Long Branch.....	30.04	30.45	24	29.52	2	19	38	ne.	15	65	60
Newark.....	.....	.....	.....	.....	.....	.....	35	ne.	15	65	.....
New York, N. Y.....	30.03	30.43	24	29.50	20	19	68	nw.	22	68	51
Philadelphia, Pa.....	30.05	30.46	24	29.62	2	12	35	ne.	15	71	52
Trenton.....	30.02	30.44	24	29.58	2	13	50	w.	2	67	52

en.

§ § Instruments are read in the morning; the maximum temperature then read is charged to the preceeding day, on which it almost always occurs.

Departure of the Mean Temperature from the Normal, April, 1914.



UNIVERSITY OF ILLINOIS
URBANA

U. S. DEPARTMENT OF AGRICULTURE

WEATHER BUREAU

CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

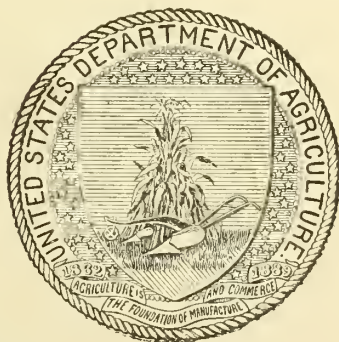
NEW JERSEY SECTION

MAY, 1914

BY

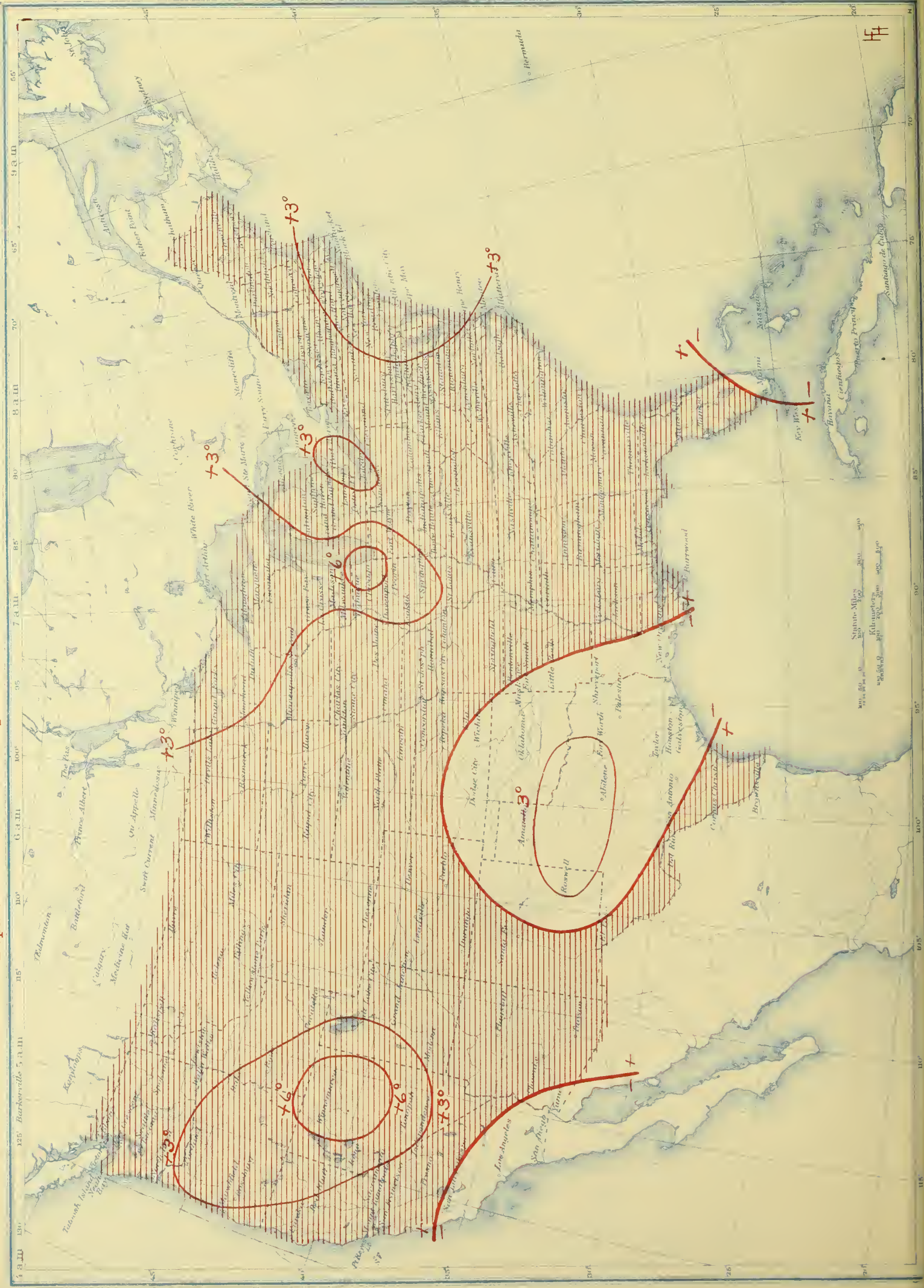
G. HAROLD NOYES

SECTION DIRECTOR



PHILADELPHIA, PA.
WEATHER BUREAU OFFICE
JUNE 21, 1914.

Departure of the Mean Temperature from the Normal, May, 1914.



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Section Director.

VOL. XXVII. TRENTON, N. J., MAY, 1914. No. 5.

GENERAL SUMMARY.

Excepting the year 1911, the month of May 1914 was warmer than any May since 1896. There was one cool period, from the 12th to the 16th, temperatures in most instances being some ten degrees below normal on the 13th. The remainder of the month was consistently warm, culminating on the 27th in temperatures of 95° to 98° away from the shore. This warm period averaged some fifteen to eighteen degrees above normal, and terminated in thundershowers on the afternoon of the 27th, with a sharp drop in temperature.

The favorable temperature condition, so far as agriculture is concerned, was negatived, by a total absence of rain from the 15th to the 27th. In the Southern Interior, the showers of the 27th were insufficient to moisten the parched soil and the month closed with vegetation suffering for lack of rain in that portion of the State. Over the remainder of the State, the rains of the 27th and 30th were more generous and agriculture showed greater promise. The warmth and absence of rain in the latter half of the month made it one of the most pleasant in several years. The first day of the month was the coldest, temperatures at every station, except Cape May, being 40° or under, with several reports of 30°, 31°, and 32°. Frosts were general on the 1st and 2d. On the 5th, with the passage of the lowest barometric pressure of the month, the heaviest rainstorm occurred. In northern portions of the State, the rainfall of this storm exceeded an inch in 24 hours, and in other sections the amount was more than two thirds of an inch. The thunderstorms of the 9th and 27th were attended by some hail, that on the 27th, in a few instances doing some damage.

TEMPERATURE.

The monthly mean temperature for the State was 63.1°, which was 2.8° above normal and more than fifteen degrees warmer than April. The Sea Coast and Highlands and Kittatinny Valley were slightly lower than the State mean, and the remainder of the State but a fraction of a degree above. The highest temperature, 98° on the 27th, occurred at Bridgeton, Burlington, Tuckerton and Elizabeth. The highest temperature, 98°, is near the record and has been equalled or exceeded only in 1911, 1903, 1900, 1896 and 1895, or five times in thirty years. The lowest 30°, on the 1st, occurred at Culvers Lake and Highwood. The average temperature was above normal at every station, the greatest excess being over the northern counties. The lowest averages, as is usual, occurred in northern Sussex and Passaic counties. Stations near the Delaware River reported the highest averages.

PRECIPITATION.

The average rainfall was 2.57 inches, which was 1.30 inches below normal. The variation in rainfall in May in past years has varied from 0.59 inch in 1903 to 7.72 inches in 1894, so that the record of this year is not unusual. All stations except Sussex and Culvers Lake showed a deficiency in rainfall, the greatest lack being over the Southern Interior, which averaged over two

inches below normal. The rainfall occurred on 8 days in the northern half, and six in the southern, averaging 7. The greatest amount of rain reported was 5.09 inches at Sussex, and the least, 0.95 inch at Bridgeton. Except for the 27th and 30th, all the rain fell between the 5th and 13th. The rain received in the counties adjoining New York Bay and along the northern and northwestern boundary was about as much as could be desired by all interests, taken as a whole.

WIND.

The prevailing wind direction over each division of the State was from the northwest, with an approximate velocity of about ten miles per hour. The highest wind velocity was during the thunder squall of the 27th at Long Branch when it reached 60 miles per hour for a five minutes period. Strong winds were also noted on the 12th and 23d, in northern and northeastern portions.

SUNSHINE AND CLOUDINESS.

Sunshine approximated more than seventy percent of the possible, which was somewhat more than the usual amount. Averaging the whole State, there were 16 clear, 9 partly cloudy and 6 cloudy days. The distribution of cloudiness was much the same over the various portions of the State.

MISCELLANEOUS PHENOMENA.

Thunderstorms were commonly reported on the 5th, 9th, 11th, 12th, 13th, 27th and 30th. The storm of the 9th is believed to have been the cause of the death from lightning of a man near Hammonton. Regarding the hail which accompanied the thunderstorm of the 27th, the Observer at Phillipsburg reports that the hail pellets were six tenths of an inch in diameter and three tenths of an inch thick. This storm over nearly all sections of the State was of considerable force and did minor damage. Hail was reported only on the 9th and 27th. Haze was a general condition on the 21st. Solar halos were noted on the 3d, and lunar halos on the 7th. Considerable frost occurred on low ground on the 1st and 2d, that on the first being "killing" in some instances. Light frosts were observed near Burlington and Trenton on the 15th.

COMPARATIVE DATA FOR MAY.

Year.	Temperature.			Average Precipitation.		
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.
1885.....	57.3	90	29	2.74	5.20	1.18
1886.....	58.8	87	36	6.07	8.46	4.15
1887.....	63.3	94	35	1.37	3.82	0.08
1888.....	58.6	90	26	4.92	6.48	3.00
1889.....	62.3	94	32	4.09	6.60	2.43
1890.....	60.7	87	33	4.24	7.17	2.60
1891.....	59.5	93	28	2.97	5.39	1.78
1892.....	60.1	90	30	5.04	6.52	3.26
1893.....	59.4	95	29	4.07	6.38	2.55
1894.....	61.4	93	30	7.72	15.61	3.57
1895.....	60.9	102	28	2.85	3.95	1.66
1896.....	65.3	98	29	3.21	4.54	1.62
1897.....	60.6	87	29	5.68	9.11	1.71
1898.....	58.5	93	29	7.00	9.26	3.92
1899.....	61.1	94	29	1.92	3.15	1.15
1900.....	60.9	98	26	4.71	7.33	2.53
1901.....	58.6	90	29	5.60	8.13	3.10
1902.....	60.3	95	29	2.04	4.63	1.11
1903.....	62.7	98	21	0.59	1.32	0.08
1904.....	62.8	97	31	2.60	6.69	1.01
1905.....	61.4	89	22	1.71	3.94	0.42
1906.....	61.0	94	24	4.21	6.28	2.37
1907.....	55.4	91	22	5.05	8.09	2.51
1908.....	61.6	95	29	7.10	9.99	4.39
1909.....	60.0	91	27	2.30	4.84	0.79
1910.....	60.0	94	27	2.54	4.25	1.48
1911.....	64.5	99	22	1.37	3.84	0.31
1912.....	62.0	92	31	4.09	6.47	2.79
1913.....	60.3	94	25	3.45	4.86	2.53
1914.....	63.7	98	30	2.93	5.09	0.95

Climatological data for May, 1914.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation in. or more.	Clear.	Pt. cloudy.			Cloudy.
<i>The Highlands and Kittatinny Valley.</i>																			
Belvidere.....	Warren.....	289	23	63.6	+2.9	95	27	32	1 41	3.38	-0.51	1.13	0	9	23	3	5	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	22	60.4	+3.1	91	27	33	2 44	4.64	-0.16	1.65	0	8	20	7	4	nw.	George S. Briggs.
Culvers Lake.....	Sussex.....	848	13	61.1	+3.0	94	27	30	1 42	3.93	+0.43	1.12	0	8	24	3	4	nw.	Brice E. Riker.
Dover.....	Morris.....	600	30	61.6	+3.0	94	27	33	1 42	2.58	-1.56	1.43	0	6	5	21	5	.....	William C. Harris.
Layton.....	Sussex.....	550	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. A. A. Ranson.
Newton.....	Sussex.....	678	34	62.0	+2.7	94	27	34	1 38	3.60	-0.54	1.49	0	8	10	9	12	n.	F. Vernon Losee.
Phillipsburg.....	Warren.....	363	32	64.1	+2.8	94	26	38	1 39	3.85	-0.20	1.26	0	8	22	4	5	nw.	D. Wilson Smith.
Sussex.....	Sussex.....	442	24	61.4	+1.5	95	27	35	1 49	5.09	+1.18	1.39	0	9	14	10	7	nw.	George Dymock.
Means and extremes.....				62.2	+2.7	95	27	30	1 49	3.87	-0.19	1.65	0	8	17	8	6	nw.	
<i>The Red Sandstone Plain.</i>																			
Bayonne.....	Hudson.....	50	24	63.8	+3.5	95	27	38	1 36	2.50	-1.08	0.86	0	9	16	10	5	sw.	Erskine R. Eadie.
Bergen Point.....	Hudson.....	37	17	62.5	+2.8	95	27	40	1 35	3.18	-0.80	1.20	0	8	7	21	3	nw.	William H. Mitchell.
Boonton.....	Morris.....	239	24	.....	.....	.....	.....	.....	.....	2.90	-1.35	1.20	0	8	.....	.....	.....	.....	J. W. Demmers.
Chatham.....	Morris.....	234	12	.....	.....	.....	.....	.....	.....	2.66	-1.26	1.05	0	9	.....	.....	.....	.....	M. A. Butler.
Elizabeth.....	Union.....	45	35	63.8	+1.6	98	27	35	1 43	2.98	-0.94	1.03	0	10	16	11	4	w.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	26	64.2	+4.3	93	26	34	1 39	2.44	-1.85	0.79	0	11	23	3	5	nw.	Hiram E. Deats.
Highwood.....	Bergen.....	90	25	60.9	+1.2	93	27	30	1 41	2.95	-0.89	0.76	0	7	15	6	10	s.	Charles J. Bates.
Jersey City.....	Hudson.....	10	15	65.7	+4.0	97	27	40	1 34	2.48	-0.70	0.90	0	9	17	9	5	nw.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	95	27	63.8	+2.1	94	26	36	1 36	1.62	-2.45	0.72	0	6	16	11	4	sw.	Samuel W. Cochran.
Little Falls.....	Passaic.....	175	11	.....	.....	.....	.....	.....	.....	3.26	-1.50	1.17	0	9	.....	.....	.....	.....	A. Sweetman.
Mahwah.....	Bergen.....	312	12	.....	.....	.....	.....	.....	.....	4.04	-0.60	1.45	0	6	.....	.....	.....	.....	Chas. L. Barker.
Newark.....	Essex.....	159	72	66.2	+5.4	96	27	39	1 34	3.13	-0.91	1.03	0	8	17	6	8	sw.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	139	61	61.4	+0.8	95	27	32	1 38	3.65	-0.26	1.69	0	9	19	8	4	sw.	Earle C. Stillwell.
Paterson.....	Passaic.....	80	43	65.2	+3.9	97	27	37	1 38	2.68	-1.81	0.80	0	7	9	17	5	ne.	Heber A. Probert.
Plainfield.....	Union.....	100	28	63.4	+3.1	95	27	36	1 38	3.37	-0.46	1.27	0	10	15	9	7	nw.	John Neagle.
Pompton Plains.....	Morris.....	195	12	.....	.....	.....	.....	.....	.....	3.97	-0.39	1.34	0	7	.....	.....	.....	.....	M. S. Taylor
Somerville.....	Somerset.....	60	31	63.4	+3.3	96	27	32	2 42	2.79	-1.33	1.02	0	8	17	8	6	nw.	A. A. Macdonald.
South Orange.....	Essex.....	200	44	63.2	+3.2	93	27	38	1 30	2.22	-1.24	0.95	0	9	13	13	5	w.	Dr. W. J. Chandler.
New York, N. Y.....	.....	365	44	63.6	+4.3	91	27	40	1 29	1.97	-1.21	0.75	0	8	12	11	8	nw.	U. S. Weather Bureau.
Means and extremes.....				63.7	+3.1	98	27	30	1 43	2.93	-1.10	1.69	0	8	15	10	6	nw.	
<i>The Southern Interior.</i>																			
Bridgeton.....	Cumberland.....	30	33	65.6	+1.7	98	27	35	1 41	0.95	-2.98	0.45	0	4	18	8	5	w.	Henry A. Jorden.
Burlington.....	Burlington.....	12	*28	65.1	.....	98	27	37	1 40	1.67	-2.56	0.92	0	5	23	5	3	w.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	William T. Farley.
Haddonfield.....	Camden.....	75	27	64.0	+2.3	96	27	36	1 39	1.20	-2.71	0.67	0	6	17	9	5	nw.	Chas. F. Richardson.
Hammononton.....	Atlantic.....	103	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Joseph E. Abbott.
Hightstown.....	Mercer.....	135	22	63.2	+2.1	97	27	36	1 39	1.62	-2.20	1.07	0	5	20	5	6	sw.	Leon Dunbar.
Imlaystown.....	Monmouth.....	18	26	.....	.....	.....	.....	.....	.....	1.40	-2.69	0.65	0	5	19	2	10	sw.	H. E. Bullock.
Indian Mills.....	Burlington.....	76	25	63.8	+1.8	97	27	33	2 45	2.52	-1.52	1.30	0	7	17	12	2	nw.	James M. Armstrong.
Lakewood.....	Ocean.....	54	11	62.0	+1.8	97	27	33	2 43	2.49	-1.60	0.69	0	7	13	8	10	w.	R. W. Holman.
Moorestown.....	Burlington.....	75	52	64.2	+3.1	97	27	35	1 38	1.24	-2.79	0.67	0	4	19	9	3	se.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	7	.....	.....	.....	.....	.....	.....	1.75	.....	0.76	0	7	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	16	.....	.....	.....	.....	.....	.....	1.58	-1.78	0.96	0	5	23	3	5	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	43	64.1	+3.0	94	27	39	1 32	1.98	-1.54	0.77	0	8	14	11	6	nw.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	21	62.0	+2.3	98	27	31	1 44	1.97	-1.46	0.69	0	6	19	8	4	sw.	Frank R. Austin.
Vineland.....	Cumberland.....	118	46	65.1	+2.9	98	27	36	1 49	1.44	-2.33	0.70	0	6	22	7	2	nw.	Alfred Chalmers.
Woodbine.....	Cape May.....	43	23	63.4	+3.0	95	27	34	2 38	1.91	-1.99	0.66	0	6	.....	.....	.....	.....	Prof. R. D. Maltby.
Philadelphia, Pa.....	.....	117	44	66.8	+4.6	94	27	43	1 27	0.90	-2.30	0.63	0	5	11	13	7	nw.	U. S. Weather Bureau.
Means and extremes.....				63.7	+2.3	98	27	31	1 45	1.70	-2.15	1.30	0	6	18	7	6	nw.	
<i>The Sea Coast.</i>																			
Asbury Park.....	Monmouth.....	22	25	61.4	+2.7	91	26	38	1 40	1.22	-2.49	0.48	0	5	15	5	11	nw.	H. E. Denegar.
Atlantic City.....	Atlantic.....	16	41	61.0	+3.5	90	28	38	1 26	1.27	-1.73	0.73	0	5	14	10	7	sw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	36	62.8	+4.2	91	27	43	2 30	2.15	-0.84	0.75	0	5	15	11	5	nw.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	7	60.2	.....	95	26	36	1 45	1.50	.....	0.66	0	8	13	13	5	nw.	William D. Martin, Jr.
Means and extremes.....				61.4	+3.5	95	26	36	1 45	1.54	-1.69	0.75	0	6	14	10	7	nw.	
Means for the State.....				63.1	+2.8	98	27	30	1 49	2.57	-1.30	1.69	0	7	16	9	6	nw.	

† On other dates also.

* Two years temperature record.

Estimated and incomplete data are not considered in means.

All other records within the State are used in determining the Section means, but the mean departures from normal temperature and precipitation are based only on records from stations that have 10 or more years of observations.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

Daily precipitation for May, 1914.

Stations.	Day of month.																															Total.		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
<i>The Highlands and Kittatinny Valley.</i>																																		
Belvidere.....					1.13	.42			.17		.42	.57	.26													.02	.30			.09		3.38		
Charlotteburg.....					1.65			.04	.48		† 1.59																.77			.11		4.61		
Culvers Lake.....					.93	.23	.09	T.	.12		T.	.89	.33	T.													1.12		.22			3.93		
Dover.....					1.43				.07			.66	.14														.17			.11		2.58		
Layton.....																																		
Newton.....					*	1.49		T.	.36		*	.74	.50	.01													.45			.05		3.60		
Phillipsburg.....					.83	.74			.07		T.	.66	.14														1.26	.13		.02		3.85		
Sussex.....					1.05	.33	.07		.63		.05	.92	.45														1.39			.20		5.09		
<i>The Red Sandstone Plain.</i>																																		
Bayonne.....					.78	.19	T.	.07		.01	.63	.23	.23														.29			.07		2.50		
Bergen Point.....					.89	.21		.28	T.		1.00	.20	.26														.26			.08		3.18		
Boonton ||.....	.11				.09	1.20			T.	.13		.75	.21	T.														.35		.05		2.90		
Chatham ||.....	.03				.10	1.05			.08	.05		.70	.23															.30		.12		2.66		
Elizabeth.....					1.03	.22	T.	.05	*	.12	*	.88	.25	T.														.35		.08		2.98		
Flemington.....					.79	.40	.03		.07	.03	.08	.30	.28															.42	.02		.02		2.44	
Highwood.....					.76	.24	T.	.14	T.	.02	T.	.74	.27																.61		.17		2.95	
Jersey City.....					.83	.20	T.	.07	T.		.46	.20	.23										T.						.46		.03		2.48	
Lambertville.....					.72	.23			T.	.09		.06	.38																.15				1.62	
Little Falls**.....					.03	1.17	.07		T.	.39	T.	.41	.48	.06															.63		.02		3.26	
Mahwah ||.....					.55	1.32			.08			1.45	.20																.44				4.04	
Newark **.....					1.00	.13		.69	.05		.57	.24	.03																.42				3.13	
New Brunswick**.....					.05	1.69	.26	.04	.02	T.	.32	.26																	.98		.03		3.65	
Paterson.....					.80	.27	T.	.01	T.	T.	T.	.59	.21															T.	.70		.10		2.68	
Plainfield **.....					.08	1.27	.34		.02	.03		.90	.20	.12															T.	.27		.14		3.37
Pompton Plains ||.....	.06				.16	1.34	.02		T.	.88		.76	.27																.48		T.		3.97	
Somerville.....					1.02	.34	.01		.06			.49	.28	T.															.57		.02		2.79	
South Orange.....					.95	.15	T.	T.	*	.03	.40	.12	.23																.30		.04		2.22	
New York, N. Y***.....					T.	.64	.12	T.	.06			.73	.22	.03															.11		.06		1.97	
<i>The Southern Interior.</i>																																		
Bridgeton.....					.45			.18				T.	.02																.30				0.95	
Burlington.....					.92	T.		.18				.30																	.25		.02		1.67	
Clayton.....																																		
Haddonfield.....					.67	T.		.02	.01	.04		.05																		.41		T.		1.20
Hammononton.....																																		
Hightstown.....					.78	.29		T.	.09			.32	T.																.14			T.	1.62	
Inlaystown.....					.65	.15			.20	.15																			.05			T.	1.20	
Indian Mills.....					.41	.04		.09	1.30	.07			.06																.55				2.52	
Lakewood.....					.69	.37		.44	T.			T.	.06	.04															.74	.15			2.49	
Moorestown.....					.67			.04	.03																				.50			T.		1.24
Northfield.....					.76	.36		.44	.02			.03																	.06				1.75	
Pleasantville.....					.96	.01		.51				.01	.09																				1.58	
Trenton***.....					.75	.02		.01	.39	T.	.02	.66	T.																.09		.04		1.98	
Tuckerton.....					.67	.02		.58				.12																	.26			.32	1.97	
Vineland.....					.49			.08	.70		.08	.08																	.01				1.44	
Woodbine.....					.66	.03		.53	.42				.07																	.20			1.91	
Philadelphia, Pa***.....					.63	T.		.03	.01			.16	T.																.07			T.	0.90	
<i>The Sea Coast.</i>																																		
Asbury Park**.....					.48	.27		.32		.01	T.	T.																	.14			T.	1.22	
Atlantic City***.....					.73	T.		.44	T.		.05	.03	.02																T.				1.27	
Cape May City***.....					.72	.03		.75	T.			.05																		.60			2.15	
Long Branch**.....					.66	.24		.28	.02		.11	.03	.01																.15			T.	1.50	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24 hour period, midnight to midnight.

|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. † Separate dates of falls not recorded. ‡ Incomplete.

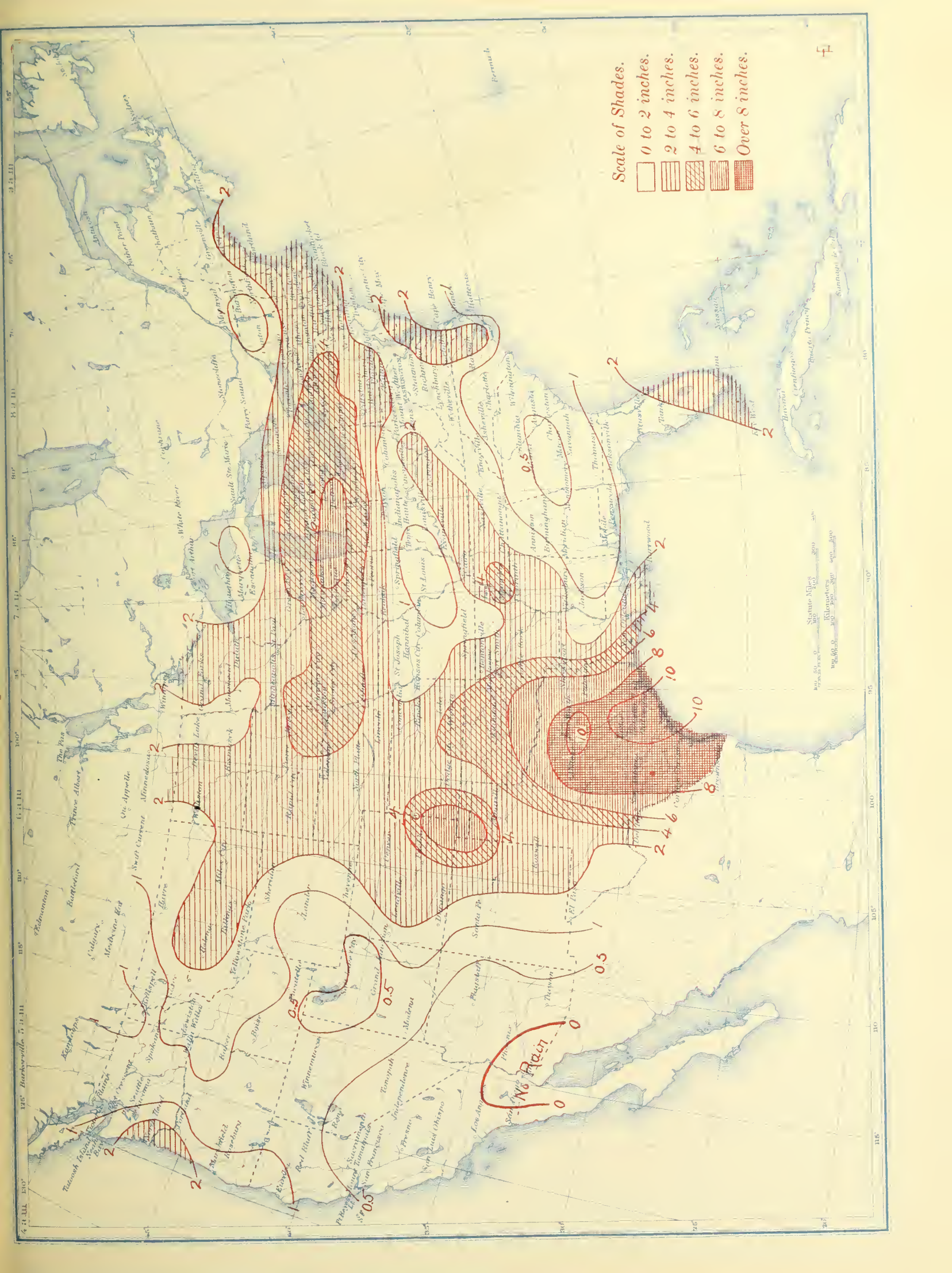
* Precipitation included in the next following measurement. ** Precipitation for 24 hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.				Moisture.	Sun. shine.
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, percentage.	Percentage of possible sunshine.
							Miles per hour.	Direction.	Date.		
Atlantic City.....	30.09	30.56	19	29.41	5	8	25	sw.	5	68	80
Asbury Park.....	30.08	30.54	18	29.38	5	5					
Cape May.....	30.11	30.58	19	29.43	5	8	30	e.	12	74	
Jersey City.....	30.04	30.51	19	29.40	5	5					72
Long Branch.....	30.06	30.55	19	29.39	5	16	60	nw.	27	61	
Newark.....	30.06	30.45	19	29.65	5		35	ne.	27	59	
New York, N. Y.....	30.05	30.52	18	29.40	5	15	90	nw.	27	55	71
Philadelphia, Pa.....	30.09	30.56	19	29.36	5	10	46	ne.	27	58	68
Trenton.....	30.05	30.52	19	29.36	5	10	35	e.	12	58	74

Daily temperatures for May, 1914.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.	
<i>The Highlands and Kittatinny Valley.</i>																																	
Belvvedere.....	Maximum	66	69	75	81	67	82	78	72	71	75	80	65	56	70	71	73	76	81	85	89	87	88	78	74	88	93	95	86	85	83	85	78.2
	Minimum	32	38	37	42	56	54	53	53	54	46	48	52	42	46	39	38	41	41	45	48	52	49	61	49	53	63	68	63	52	54	51	49.0
Charlotteburg.....	Maximum	60	63	71	72	66	75	73	71	69	72	78	74	50	67	65	67	70	78	84	84	85	86	83	73	81	90	91	80	79	80	81	74.8
	Minimum	36	33	43	41	40	50	45	50	50	47	52	49	39	43	34	34	34	34	45	43	54	47	60	49	49	60	64	63	46	44	47	46.0
Dover.....	Maximum	68	64	72	73	59	76	74	58	70	74	79	63	45	77	67	69	73	81	84	87	83	88	73	76	82	93	94	85	70	83	84	75.0
	Minimum	33	35	41	43	48	52	50	42	52	47	50	44	40	43	38	38	39	39	46	65	58	59	56	47	55	55	66	63	52	49	49	48.2
Layton.....	Maximum	63	66	71	76	65	78	75	62	70	75	77	61	49	70	86	70	71	79	84	87	83	88	73	75	84	92	94	85	75	83	84	75.8
	Minimum	33	38	39	44	55	51	52	50	51	46	54	46	40	41	39	38	43	42	46	50	55	50	57	49	54	63	61	59	45	51	50	48.2
Newton.....	Maximum	63	66	71	76	65	78	75	62	70	75	77	61	49	70	86	70	71	79	84	87	83	88	73	75	84	92	94	85	75	83	84	75.8
	Minimum	34	38	39	44	55	51	52	50	51	46	54	46	40	41	39	38	43	42	46	50	55	50	57	49	54	63	61	59	45	51	50	48.2
Phillipsburg.....	Maximum	64	66	74	80	73	80	77	73	68	75	81	69	62	71	69	71	76	80	84	89	87	88	76	82	87	94	94	86	75	83	84	78.0
	Minimum	38	41	40	43	60	55	55	52	54	47	52	54	43	45	40	40	42	42	46	50	58	51	56	52	62	64	65	62	54	53	50	50.2
Sussex.....	Maximum	61	64	73	76	68	78	74	66	69	73	80	65	49	68	65	70	72	80	87	88	82	88	76	77	83	92	95	83	74	80	83	75.5
	Minimum	35	37	37	44	56	51	50	51	52	46	51	46	40	44	38	36	39	39	40	39	39	50	60	49	55	64	63	62	53	51	51	47.4
<i>The Red Sandstone Plain.</i>																																	
Bayonne.....	Maximum	65	67	73	67	62	79	74	59	73	77	80	62	50	64	69	72	75	77	86	89	82	90	78	76	75	93	95	88	77	81	85	75.2
	Minimum	38	41	45	48	52	52	55	52	55	53	55	49	42	46	45	46	47	47	54	55	58	54	64	55	55	64	68	65	56	54	58	52.5
Bergen Point.....	Maximum	64	67	74	65	62	74	74	64	71	77	81	62	50	64	60	69	74	74	82	85	82	88	75	75	77	93	95	87	75	78	82	74.2
	Minimum	40	42	41	47	52	51	54	52	54	51	54	40	41	46	43	44	44	45	51	53	54	53	62	53	53	63	67	64	55	52	53	50.8
Elizabeth.....	Maximum	67	71	76	73	63	79	79	63	75	79	82	71	51	70	71	73	77	80	87	91	86	92	81	79	85	95	98	90	76	84	88	78.5
	Minimum	35	37	38	43	53	53	52	53	53	51	51	50	43	46	39	38	42	41	45	49	54	49	61	48	52	61	68	63	57	49	50	49.2
Flemington.....	Maximum	66	68	73	79	69	81	79	73	68	77	83	71	57	70	70	71	76	80	85	91	86	91	79	75	84	93	93	87	73	85	87	78.1
	Minimum	34	36	44	42	56	55	54	54	54	50	51	57	42	46	40	38	44	43	46	55	58	49	62	51	50	60	67	63	56	53	48	50.3
Highwood.....	Maximum	64	67	75	69	60	72	75	63	73	77	78	65	49	66	68	70	72	78	84	84	78	88	74	77	79	92	93	84	72	79	83	74.5
	Minimum	30	34	35	45	51	51	..	..	48	45	51	48	41	45	37	36	40	39	46	46	52	47	62	48	49	63	66	62	56	50	48	47.3
Jersey City.....	Maximum	67	69	74	67	61	78	74	62	73	80	79	67	51	66	70	73	77	77	85	90	82	91	78	79	78	94	97	90	79	82	86	76.6
	Minimum	40	43	47	50	54	53	58	53	55	59	49	44	47	51	47	50	50	51	55	60	65	57	66	57	58	64	69	67	58	56	60	54.8
Lambertville.....	Maximum	63	68	70	73	72	83	76	75	74	72	84	77	60	70	65	75	78	76	76	88	73	83	74	80	83	94	93	83	72	83	78	76.5
	Minimum	36	37	39	45	59	56	59	54	55	50	54	55	44	46	40	39	43	43	47	52	54	50	63	55	54	63	69	66	55	56	50	51.2
Newark.....	Maximum	65	71	74	68	68	76	78	76	73	78	82	68	67	67	70	72	74	81	90	88	85	91	88	78	77	95	96	88	70	82	87	78.2
	Minimum	39	44	49	49	52	52	52	53	55	56	58	47	42	44	49	47	47	50	56	61	65	59	65	56	65	70	66	61	54	60	54.2	
New Brunswick.....	Maximum	68	63	69	76	59	75	73	56	69	75	80	59	45	66	68	68	72	77	81	86	81	86	74	72	86	91	95	87	64	81	80	73.6
	Minimum	32	38	42	44	49	51	54	49	51	48	53	42	41	43	44	43	46	45	49	53	55	48	60	50	51	61	65	63	51	50	53	49.2
Paterson.....	Maximum	67	70	77	73	65	78	77	70	73	80	81	70	50	68	70	73	77	87	86	89	85	92	83	78	82	95	97	90	80	82	85	78.2
	Minimum	37	41	45	46	52	53	54	52	52	53	55	50	42	46	44	43	48	47	55	57	60	54	65	54	54	62	68	66	59	51	55	52.3
Plainfield.....	Maximum	66	69	74	77	63	79	78	68	74	77	82	64	49	68	70	71	75	79	83	86	84	88	76	75	84	92	95	88	74	80	83	76.5
	Minimum	36	37	44	43	54	53	53	54	54	52	54	49	42	46	40	39	42	41	46	53	62	50	63	51	51	62	68	63	56	50	53	50.4
Somerville.....	Maximum	64	68	72	78	73	80	78	75	71	76	82	76	54	69	69	70	74	80	84	89	86	89	85	76	94	85	96	89	80	84	84	78.4
	Minimum	34	32	43	39	54	53	50	52	53	50	56	51	48	45	39	36	41	41	44	54	52	47	57	46	58	50	63	62	53	50	49	48.5
South Orange.....	Maximum	63	65	71	67	61	75	75	59	70	75	79	61	49	67	67	69	72	77	81	85	82	86	74	74	82	91	93	85	70	81	81	73.8
	Minimum	38	39	48	47	53	53	55	53	54	55	55	47	42	46	45	42	48	47	54	63	65	53	62	50	54	64	68	66	53	51	57	52.5
New York, N. Y.....	Maximum	62	64	70	63	62	74	75	62	70	74	78	60	49	64	66	68	72	75	83	85	80	86	73	72	72	89	91	84	73	78	81	72.7
	Minimum	40	43	49	52	52	50	59	51	55	56	60	42	42	45	52	48	52	55	60	64	64	57	60	56	57	65	66	66	54	54	61	54.4
<i>The Southern Interior.</i>																																	
Bridgeton.....	Maximum	67	69	75	78	70	77	81	68	69	79	84	83	68	70	75	73	78	82	85	88	88	90	83	78	88	94	98	92				



Scale of Shades.

- 0 to 2 inches.
- 2 to 4 inches.
- 4 to 6 inches.
- 6 to 8 inches.
- Over 8 inches.

Scale Miles
0 100 200 300 400
Kilometers
0 100 200 300 400

UNIVERSITY OF ILLINOIS
URBANA

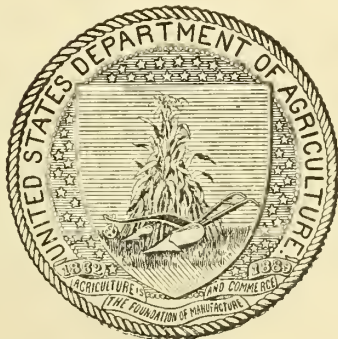
U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU
CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

JUNE, 1914

BY
G. HAROLD NOYES
SECTION DIRECTOR



PHILADELPHIA, PA.
WEATHER BUREAU OFFICE
JULY 27, 1914.

Departure of the Mean Temperature from the Normal, June, 1914.



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Section Director.

VOL. XXVII.

TRENTON, N. J., JUNE, 1914.

No. 6.

GENERAL SUMMARY.

The general weather conditions in New Jersey in June 1914 were more than usually pleasant. With some few days where-in the temperatures rose high in the nineties, and with others with it so cold as to permit frost, the average was slightly cooler than is usual for June. Out of door occupations were greatly favored by this moderation of temperature and also by a moderate deficiency of rain. Averaging the State as a whole, June is a temperate month both in temperature and rainfall, so that when these two highly important weather factors are slightly subnormal, the result is unusually agreeable for out-of door life.

The serious feature of weather conditions was the effect on agriculture resulting from this lack of rain, coupled with rain deficiency from the commencement of the growing season and a lack of ground water from an unusually dry winter. The counties along Delaware Bay, and the lower reaches of the Delaware River were the worse sufferers from the drought, and some early garden crops such as asparagus and strawberries yielded but poor return. The lowest temperatures of the month were on the 6th and 17th, frosts were reported on the northern highlands on the 6th, and in the cranberry bogs on the 6th, 17th and 18th. The warm periods of the month were the first three days, the 7th and 8th, 10th to 13th and from the 24th to 27th. The remaining periods of the month, temperatures were mostly below normal, especially from the 15th to 22d. The warmest day, when temperatures at several stations reached 98°, was the 25th. The eastern half of the State was from four to six degrees cooler than the western portion, especially the counties bordering the lower Delaware.

TEMPERATURE.

The monthly mean temperature for the State, as deduced from observations of 35 stations, was 68.5°, which was 0.8° below normal. Monthly mean temperatures have ranged from 64.0° in 1903 to 72.4° in 1892. The Red Sandstone Plain averaged about the same as the State mean, while the highlands and Kittatinny Valley and the Sea coast were cooler, and the Southern Interior was warmer. The highest temperature was the same as in May, 98°, and occurred at Clayton and Elizabeth on the 8th and 25th, respectively, and subsequent dates. The lowest temperature was 35° and occurred at Woodbine on the 17th and subsequently. The 17th was in nearly all instances the coldest day of the month throughout the State. The lowest average temperatures occurred in northern Morris, Passaic and Sussex counties, and the cool zone extended along the central dividing ridge of the State to Cape May County. The warmest regions of the state were in Gloucester, Salem and Cumberland counties, which were also the driest. Some of the stations along the coast and near New York Bay were slightly above normal in warmth, but elsewhere it was subnormal.

PRECIPITATION.

The average rainfall for the State, as deduced from observa-

tions of 44 stations, was 2.66 inches which was 1.17 inches below normal. The greatest amount was 4.85 inches at Belvidere, and the least, 1.09 inches at Woodbine. June rainfall in past years has varied from 1.57 inches in 1901 to 7.68 inches in 1903, the latter year also being the coldest June on record. The occurrence of rain was frequent and regular throughout the State, the average being 10 days with a measurable quantity. Thunder was heard on an average of 10 days during the month, so that nearly all rain was attendant upon thunderstorms. In the northern half of the State, during the first three days, on the 6th, from the 11th to the 14th, on the 17th, 18th 26th and 30th there was practically no rain. The dry days in the southern half of the State were the 1st, 3d, 6th, 7th, 11th, 13th, 16th to 18th, 26th and 30th.

WIND.

The prevailing wind direction over the State as a whole was from the northwest. The northern half was northwest, the southern portion was southeast, and the coast southwest. The wind movement was approximately ten miles per hour, the highest velocity being 60 miles per hour from the northwest on the 20th at Long Branch. Considerable wind was also noted on the 16th, 28th and 30th.

SUNSHINE AND CLOUDINESS.

Sunshine was nearly the same as usual for the season, approximating sixty-five per cent. The number of clear days, averaging the State as a whole, was 14, partly cloudy, 9; and cloudy 7. A greater amount of clear weather prevailed in northern regions than elsewhere, and the greatest amount of cloudiness was along the coast. Fog of considerable density was generally noted on the 24th and 28th.

MISCELLANEOUS PHENOMENA.

Thunderstorms in some portion of the State occurred on 19 days, 2d, 4th, 7th to 10th, 12th 15th, 16th, 19th to 25th, and 27th to 29th. The storms of the 8th and 15th were accompanied in some instances by hail. Solar and lunar halos were observed on the 3d. An aurora was observed on the 13th at 3 a. m. by the observer at Highwood.

COMPARATIVE DATA FOR JUNE.

Year.	Temperature.			Average Precipitation.		
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.
1885.....	68.7	97	39	1.79	3.37	0.72
1886.....	67.1	91	41	3.38	5.79	2.22
1887.....	68.2	97	42	6.77	10.29	4.21
1888.....	70.2	99	39	2.59	5.69	1.67
1889.....	69.9	91	40	3.73	6.75	2.39
1890.....	70.7	95	42	3.59	5.16	0.99
1891.....	69.7	102	38	2.92	6.71	1.24
1892.....	72.4	98	44	3.85	6.12	1.58
1893.....	69.7	103	40	2.95	7.02	0.46
1894.....	70.6	102	35	2.28	5.90	0.99
1895.....	71.7	103	39	3.24	5.99	0.93
1896.....	68.1	96	37	5.46	13.45	2.64
1897.....	66.1	95	35	3.38	5.50	2.12
1898.....	70.1	100	38	2.10	3.54	1.13
1899.....	72.3	103	38	2.50	4.34	1.01
1900.....	70.4	97	39	3.08	4.91	1.10
1901.....	70.0	103	35	1.57	4.36	0.73
1902.....	67.5	99	37	6.57	10.21	4.54
1903.....	64.0	92	37	7.68	15.02	2.39
1904.....	68.6	100	34	3.13	5.44	1.91
1905.....	68.3	96	35	3.43	8.71	1.67
1906.....	70.4	98	38	4.48	9.18	1.45
1907.....	64.7	96	31	4.41	6.85	3.15
1908.....	69.9	99	35	2.32	4.63	0.77
1909.....	70.0	99	36	3.26	5.70	1.71
1910.....	66.9	95	34	5.17	8.01	2.66
1911.....	68.9	97	40	5.36	10.11	2.84
1912.....	68.0	98	33	1.94	3.61	0.91
1913.....	69.1	98	31	1.80	3.76	0.68
1914.....	68.5	98	35	2.66	4.85	1.09

Climatological data for June, 1914.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.			Prevailing direction of wind.	Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation .01 in. or more.	Clear.			Pt. cloudy.	Cloudy.
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	23	68.3	-0.7	94	25	41	6	37	4.85	+0.45	1.20	0	8	19	5	6	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	22	64.8	-0.7	92	24	38	13	43	3.01	-1.25	0.78	0	8	16	12	2	nw.	George S. Briggs.
Culvers Lake.....	Sussex.....	848	13	.....	.....	.....	.....	37	20	.....	3.50	-0.34	0.89	0	14	21	4	5	w.	Brice E. Riker.
Dover.....	Morris.....	600	30	65.4	-1.8	92	24	41	6	38	3.36	-0.76	0.83	0	12	5	12	13	.....	William C. Harris.
Layton.....	Sussex.....	550	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. A. A. Ranson.
Newton.....	Sussex.....	678	34	66.7	-1.0	92	24	42	6	37	3.80	+0.01	0.92	0	9	14	3	13	sw.	F. Vernon Losee.
Phillipsburg.....	Warren.....	363	32	69.5	-0.2	95	24	43	6	39	2.16	-1.99	0.58	0	12	18	6	6	nw.	D. Wilson Smith.
Sussex.....	Sussex.....	442	24	65.6	-2.0	92	24	43	5	37	2.92	-0.81	0.78	0	9	16	1	13	nw.	George Dymock.
Means and extremes...				66.7	-1.1	95	24	37	20	43	3.37	-0.69	1.20	0	10	16	6	8	nw.	
<i>The Red Sandstone Plain.</i>																				
Bayonne.....	Hudson.....	50	24	68.8	-0.9	94	25	49	20	32	2.43	-1.21	0.62	0	13	16	4	10	nw.	Erskine R. Eadie.
Bergen Point.....	Hudson.....	37	17	67.7	-1.1	92	112	41	17	35	1.92	-2.03	0.64	0	9	6	20	4	nw.	William H. Mitchell.
Boonton.....	Morris.....	239	24	.....	.....	.....	.....	.....	.....	.....	3.47	-0.27	0.83	0	12	.....	.....	.....	.....	J. W. Demmers.
Chatham.....	Morris.....	234	12	.....	.....	.....	.....	.....	.....	.....	4.28	+0.24	0.98	0	13	.....	.....	.....	.....	M. A. Butler.
Elizabeth.....	Union.....	45	35	69.8	-1.4	98	125	41	6	43	2.32	-1.28	0.62	0	11	12	11	7	nw.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	26	68.7	-0.4	97	25	44	6	38	1.81	-2.56	0.50	0	8	17	6	7	sw.	Hiram E. Deats.
Highwood.....	Bergen.....	90	25	66.0	-2.3	91	25	40	6	36	2.62	-1.16	0.93	0	10	13	8	9	nw.	Charles J. Bates.
Jersey City.....	Hudson.....	10	15	70.3	+0.3	95	25	50	20	29	2.30	-1.00	0.61	0	10	11	8	11	sw.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	95	27	70.8	+0.5	96	124	45	6	37	2.41	-1.87	0.57	0	12	13	15	2	nw.	Samuel W. Cochran.
Little Falls.....	Passaic.....	175	11	.....	.....	.....	.....	.....	.....	.....	2.73	-1.55	0.79	0	11	.....	.....	.....	.....	A. Sweetman.
Mahwah.....	Bergen.....	312	12	.....	.....	.....	.....	.....	.....	.....	3.56	-0.90	1.01	0	11	.....	.....	.....	.....	Chas. L. Barker.
Newark.....	Essex.....	159	72	69.8	+0.1	95	25	48	5	30	2.30	-1.33	0.60	0	13	12	6	12	sw.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	139	61	67.0	-2.6	93	25	44	6	34	2.32	-1.45	0.52	0	9	13	7	10	sw.	Earle C. Stillwell.
Paterson.....	Passaic.....	80	43	69.4	-0.7	96	24	48	16	33	2.98	-1.34	0.71	0	12	9	13	8	sw.	Heber A. Probert.
Plainfield.....	Union.....	100	28	67.8	-1.5	92	112	46	3	34	2.67	-1.46	0.64	0	13	10	11	9	sw.	John Neagle.
Pompton Plains.....	Morris.....	195	12	.....	.....	.....	.....	.....	.....	.....	3.42	-0.74	0.65	0	11	.....	.....	.....	.....	M. S. Taylor
Somerville.....	Somerset.....	60	31	68.2	-1.0	95	25	41	17	41	2.71	-1.44	0.84	0	9	16	7	7	nw.	A. A. Maedonald.
South Orange.....	Essex.....	200	44	68.0	-0.8	91	25	47	17	33	2.93	-0.63	0.60	0	10	15	7	8	w.	Dr. W. J. Chandler.
New York, N. Y.....		365	44	67.6	-0.9	90	25	48	20	26	1.83	-1.43	0.53	0	12	9	8	13	nw.	U. S. Weather Bureau.
Means and extremes...				68.7	-0.9	98	125	40	6	43	2.73	-1.22	1.01	0	11	13	9	8	nw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	33	72.6	-0.8	98	25	46	16	38	1.44	-2.33	0.65	0	9	17	7	6	w.	Henry A. Jorden.
Burlington.....	Burlington.....	12	28	70.1	.....	96	12	41	4	38	2.63	-1.29	0.60	0	11	21	3	6	nw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	18	70.1	-1.3	98	18	41	6	37	2.30	-1.10	0.62	0	10	.....	.....	.....	.....	George L. Wilson.
Haddonfield.....	Camden.....	75	27	70.1	-0.6	95	12	44	6	36	2.29	-1.32	0.48	0	11	10	13	7	se.	Chas. F. Richardson.
Hammononton.....	Atlantic.....	103	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Joseph E. Abbott.
Hightstown.....	Mercer.....	135	22	68.8	-0.6	92	18	42	6	36	2.76	-1.25	0.57	0	8	16	3	11	sw.	Leon Dunbar.
Imlaystown.....	Monmouth.....	18	26	.....	.....	.....	.....	44	17	.....	3.42	-0.56	0.80	0	9	14	11	5	sw.	H. E. Bullock.
Indian Mills.....	Burlington.....	76	25	69.5	-1.5	96	112	38	17	44	3.47	-0.32	1.85	0	7	18	6	6	se.	James M. Armstrong.
Lakewood.....	Ocean.....	54	11	67.4	-0.9	94	25	40	17	42	3.37	-0.83	1.29	0	10	10	10	10	w.	R. W. Holman.
Moorestown.....	Burlington.....	75	52	69.4	-0.8	95	12	44	6	34	2.54	-1.26	0.66	0	10	13	13	4	se.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	7	.....	.....	.....	.....	.....	.....	.....	2.09	.....	0.87	0	12	.....	.....	.....	.....	William L. Fliek.
Pleasantville.....	Atlantic.....	26	16	.....	.....	.....	.....	.....	.....	.....	2.23	-1.54	0.72	0	12	18	9	3	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	43	69.4	-0.1	92	24	49	17	31	1.74	-1.75	0.53	0	10	11	8	11	nw.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	21	68.6	-0.4	95	24	39	17	38	2.89	-0.88	0.70	0	12	18	11	1	se.	Frank R. Austin.
Vineland.....	Cumberland.....	118	46	71.0	-0.6	97	18	44	17	41	1.56	-2.02	0.42	0	9	19	10	1	sw.	Alfred Chalmers.
Woodbine.....	Cape May.....	43	23	67.4	-1.6	95	12	35	17	45	1.09	-2.41	0.44	0	9	25	5	0	.....	Prof. R. D. Maltby.
Philadelphia, Pa.....		117	44	72.0	+0.8	94	25	51	20	29	3.70	+0.40	2.19	0	10	9	11	10	nw.	U. S. Weather Bureau.
Means and extremes...				69.5	-0.8	98	18	35	17	45	2.39	-1.35	1.85	0	10	16	8	6	se.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	25	67.4	-0.8	93	112	50	13	28	1.54	-2.26	0.48	0	8	13	6	11	se.	H. E. Denegar.
Atlantic City.....	Atlantic.....	16	41	68.3	+1.5	93	12	50	6	28	2.25	-0.78	0.65	0	11	8	10	12	sw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	36	68.3	+0.6	95	12	50	6	32	2.51	-0.53	1.38	0	11	11	16	3	sw.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	7	66.2	.....	95	25	46	6	28	2.23	.....	0.57	0	10	13	6	11	nw.	William D. Martin, Jr.
Means and extremes...				67.5	+0.3	95	112	46	6	32	2.13	-1.19	1.38	0	10	11	10	9	sw.	
Means for the State.....				68.5	-0.8	98	18	35	17	45	2.66	-1.17	1.85	0	10	14	9	7	nw.	

† On other dates also.

* Two years temperature record.

Estimated and incomplete data are not considered in means.

All other records within the State are used in determining the Section means, but the mean departures from normal temperature and precipitation are based only on records from stations that have 10 or more years of observations.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

Daily precipitation for June, 1914.

Stations.	Day of month.																															Total.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>The Highlands and Kittatinny Valley.</i>																																	
Belvidere.....				.55				.37							.40				*	.70			1.20		.67		.63	.33				4.85	
Charlotteburg.....				* .78				.33							.57				*	.53	T.	T.		.12			.17	.51				3.91	
Culvers Lake.....				.82	.10			.89							.02	.03			.01	.28	T.	.02	.19	.10	.50		.15	.17	.22			3.50	
Dover.....				.83			.18	.12		.05					.74				.48			.21	.04		.12		*	.35	.24			3.36	
Layton.....																																	
Newton.....				.86				.57				T.			T.			T.		.92		.04	.53	.13			.23	.17	.35			3.80	
Phillipsburg.....				.58	.04			.23				T.			.02	T.			T.	.51		.16	.23	.07	.14		.04	.12	.02			2.16	
Sussex.....				.78				.20							.42				.32			.10	.18				.23	.30	.39			2.92	
<i>The Red Sandstone Plain.</i>																																	
Bayonne.....				.60	.02			.44		.22					.37	.21			.06	.12		.07			.18		.05	.04	.05			2.43	
Bergen Point.....				.62	.02			.36		.34					.31				.03						.08		T.	.08	.08			1.92	
Boonton ||.....				.23	.60			.13	.61						.08	.23			.41		.09	.01	.04	.07		.03	.25	.69				3.47	
Chatham ||.....				.15	.48			.22	.55	.38					.30	.42			.45		.10	.08		.12		.05	.38	.60				4.28	
Elizabeth.....	T.			.62			.12	.09	.22						.23	.37				.25	T.	.06	T.	T.	.12		T.	.05	.19			2.32	
Flemington.....	T.			.50	T.			.20				T.			.22				.13	.28		.17	T.	T.	.20		T.	.11	T.			1.81	
Highwood.....				.85	.08			.17							T.	.30			.02	.22	T.	.07	.02		.28		.26	.13	.22			2.62	
Jersey City.....	T.			.61			.10	.28							.36	.15			.14		T.	.05	T.	.30			.21	.10				2.30	
Lambertville.....				.57	.51			.17			.05				.25				.03	.35		.23	.04		.13		.02	.06				2.41	
Little Falls**.....				.79			.12	.25							.32	T.			.23			.09		.12	.04		.14	.17	.46			2.73	
Mahwah ||.....				.28	.73			.25	.40						.25				.65		.20		.10	.35			.10	.25				3.56	
Newark**.....				.55		.11		.13							.60	.02			.21	.05		.02	*	.20	.06		.01	.09	.25			2.30	
New Brunswick**.....				.52	.08		.26					.12			.42				.46		.10		.32				T.	.04				2.32	
Paterson.....				.68	.03			.38							T.	.41			.02	.14	T.	.09	T.	.03	.20		.50	.11	.39			2.98	
Plainfield**.....	T.			.64			.16	.07		.33		.09			.55	.05			.46		T.	.10	.03	.11	T.		.01	.07				2.67	
Pompton Plains ||.....				.16	.65			.13	.46						.09	.14			.34		.11	T.	T.	.52		T.	.23	.59				3.42	
Somerville.....				.53				.11				T.			.26				.37	.47		.61	T.	.06	.23		T.	.07				2.71	
South Orange.....				.60				.26		.10					.30	.23			.50			.07	T.		.10		.18	.59				2.93	
New York, N. Y.***.....				.48			.11	.06							.53	.02			.12			.05	T.	.26	.02		.08	.03	.07			1.83	
<i>The Southern Interior.</i>																																	
Bridgeton.....		.12		.20	.45				.16					.04					.35	.25		.10		.05	.22			.10				1.44	
Burlington.....	T.	T.		.18	*	.06		.04		.06			T.		T.	.21						.50	T.	.05	.38		.50	.05				2.63	
Clayton.....				.11	.04			.32						T.	.61				.04			.62		.02	.33		.11	.10				2.30	
Haddonfield.....				.19	.02			.01							T.	.36				.42	.18				.02	.14		.10	.37	T.			2.29
Hammonton.....																																	
Hightstown.....				.42	.15			.57				T.			.51				.43	.17		.13	T.		.38			.80	.10				2.76
Maytown.....				.25	.45			.80							.40				.10	.40	.12											3.42	
Indian Mills.....				.14				T.						.04	.33				.03			.46	T.	.16		1.85	.49					3.47	
Lakewood.....				* 1.29				.43		T.		.02			.35				.03	.15	T.	.10	T.		.10		.86	.04				3.37	
Moorestown.....				.15	.40										.16				.40	.23		.30		.04	.20		.39	.27				2.54	
Northfield.....		.14		.11	.54			.03	.03					.03	.01				.03			.19		.09			.87	.02				2.09	
Pleasantville.....		.10		.09	.44			.40						.01	.12				.08			.21		.05		.05		.20	.52	.01		2.23	
Trenton***.....	T.			.53			.10	T.				.01		T.	.34				.43		T.	.12	.05	.10	.04		T.	.02				1.74	
Tuckerton.....		.05		.13	.56			.55		.09				.01	.12				.05			.23		.40				.65	.05			2.89	
Vineland.....																																	
Woodbine.....		.10		.10	.03					.03									.03	T.		.17			.17			.44	.02			1.09	
Philadelphia, Pa.***.....	T.			.21	.01		T.							T.	.35				.24		T.	.39	.17	.10	.04		2.17	.02				3.70	
<i>The Sea Coast.</i>																																	
Asbury Park**.....	T.			.35			T.	T.		.19		.07			.22	T.			.22			T.				.01		.42	.06				1.54
Atlantic City***.....		.08	.11	.36	T.			.65						.02	.14				.04			T.		.18	T.		.04		.08	.55			2.25
Cape May City***.....		.10	.19	.08	.05			.08					.01	T.	T.				.04								.90	.84				2.51	
Long Branch**.....	T.			.57				.22		.24		.03			.46	.06			.25			T.	.10	T.			.25	.05				2.23	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24 hour period, midnight to midnight.

|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours.

† Separate dates of falls not recorded.

‡ Incomplete.

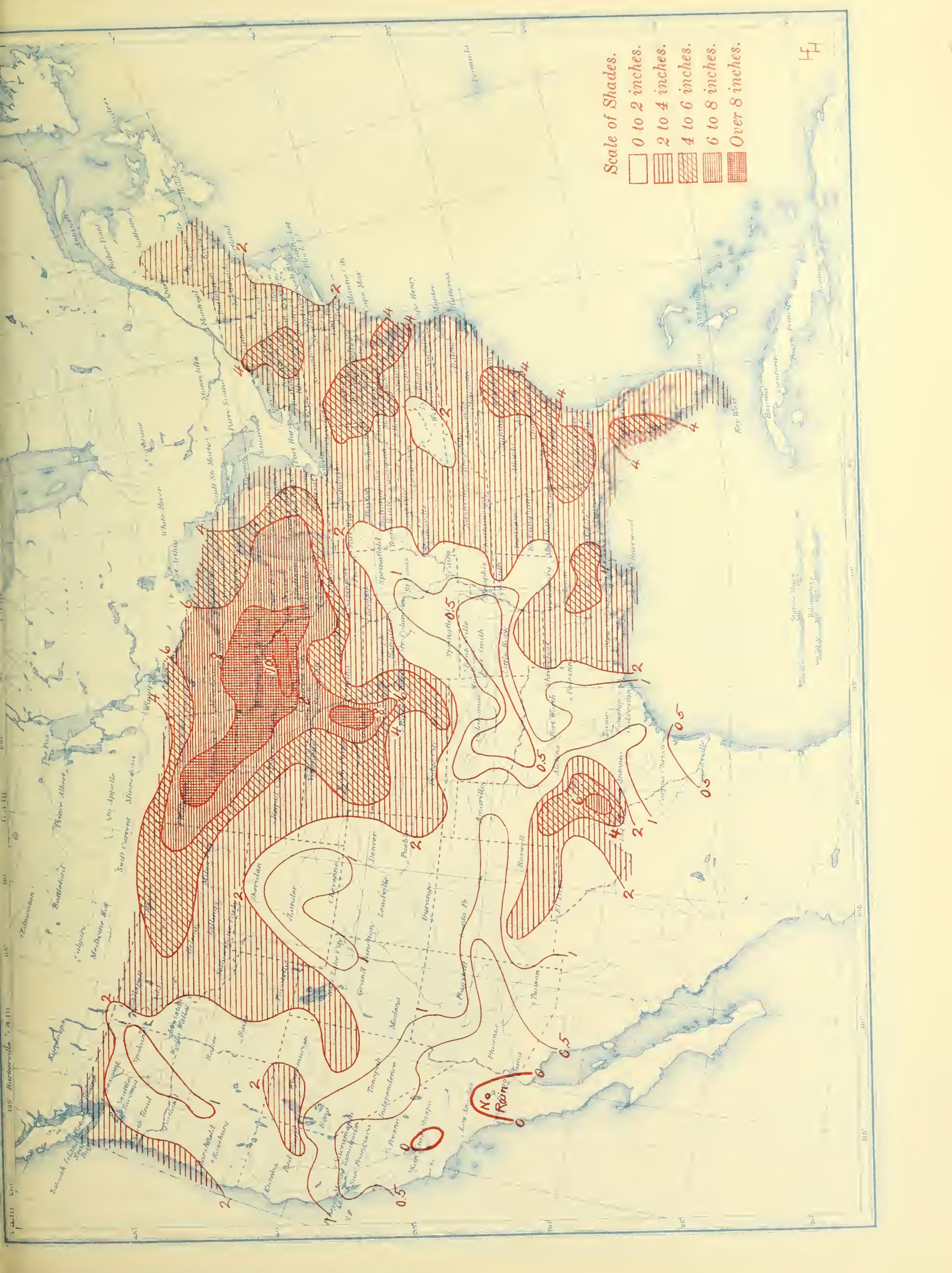
* Precipitation included in the next following measurement. **Precipitation for 24 hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.			Moisture.	Sun. shine.	
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, percentage.	Percentage of possible sunshine.
							Miles per hour.	Direction.	Date.		
Atlantic City.....	30.01	30.28	7	29.70	4	7	31	s.	28	71	76
Asbury Park.....	30.02	30.31	9	29.80	29	7	30	se.	28	78	
Cape May.....	30.01	30.30	7	29.72	4	7	30				59
Jersey City.....	29.95	30.30	9	29.68	20	15	60	nw.	20	67	
Long Branch.....	29.99	30.27	6	29.65	29	15	20		28	64	
Newark.....	29.99	30.30	9	29.68	4	15	56	nw.	20	63	61
New York, N. Y.....	29.97	30.26	6	29.68	4	9	32	nw.	16	65	64
Philadelphia, Pa.....	30.01	30.28	6	29.68	4	9	32	w.	30	65	63
Trenton.....	29.97	30.25	9	29.67	4	10	36				

Daily temperatures for June, 1914.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean
<i>The Highlands and Kittatinny Valley.</i>																																
Belvidere.....	Maximum...	75	77	82	71	74	78	85	92	75	86	91	92	82	76	75	70	79	83	82	73	78	75	83	93	94	85	76	72	77	79	80.1
	Minimum...	56	49	45	60	54	41	48	65	61	60	56	63	59	58	57	53	43	49	51	46	48	61	64	67	66	66	63	63	61	56	56.3
Charlotteburg.....	Maximum...	79	73	77	75	69	76	82	88	88	87	86	86	82	76	72	66	75	76	70	68	79	70	77	92	89	86	84	72	74	70	78.1
	Minimum...	57	44	38	54	52	43	39	65	55	54	50	55	55	52	50	48	44	42	38	44	39	58	59	59	65	61	54	59	56	55	51.1
Dover.....	Maximum...	74	77	78	68	73	77	84	90	72	85	90	90	...	...	...	70	77	77	68	71	75	69	77	92	90	85	72	64	76	71	77.7
	Minimum...	47	46	43	56	52	41	46	66	57	55	53	59	...	...	...	49	47	47	45	44	44	61	62	64	66	63	59	...	57	56	45.3
Layton.....	Maximum...	77	75	80	67	73	79	84	91	74	86	89	90	84	71	71	70	79	80	76	71	76	72	79	92	91	86	75	66	75	77	78.0
	Minimum...	55	52	46	55	52	42	48	64	58	57	56	61	59	57	55	51	46	49	48	44	48	59	53	60	65	64	61	60	57	55	54.8
Newton.....	Maximum...	79	76	82	77	73	79	87	94	89	89	91	92	86	80	77	74	80	83	78	73	80	75	86	95	93	89	78	74	77	79	82.2
	Minimum...	57	50	47	58	54	43	48	64	59	59	58	65	59	59	57	53	46	51	52	46	48	64	68	66	69	62	62	60	56	56.8	
Sussex.....	Maximum...	76	73	79	73	71	78	83	89	76	87	89	87	81	78	70	67	77	78	74	68	75	72	78	92	88	86	76	68	76	74	78.0
	Minimum...	55	49	45	56	43	59	46	64	58	57	54	61	59	56	55	50	44	49	44	44	45	59	62	68	64	63	60	60	58	56	53.3
<i>The Red Sandstone Plain.</i>																																
Bayonne.....	Maximum...	77	78	80	73	76	79	85	87	68	85	91	91	84	76	68	72	79	70	68	74	78	71	74	88	94	83	77	69	80	79	78.5
	Minimum...	60	54	54	61	65	51	53	66	57	55	62	67	62	63	56	55	50	55	55	49	53	62	62	63	68	69	64	61	59	60	59.0
Bergen Point.....	Maximum...	76	76	79	72	74	75	83	88	67	83	88	92	84	76	67	70	76	72	69	72	76	72	75	90	92	85	78	69	80	77	77.8
	Minimum...	58	55	52	60	57	49	61	66	56	57	60	66	61	60	56	53	41	54	55	49	50	62	61	63	66	62	62	60	58	58	57.6
Elizabeth.....	Maximum...	84	81	83	76	78	81	87	95	76	90	93	96	89	80	74	77	86	84	74	76	80	74	76	80	96	98	92	70	83	82	83.8
	Minimum...	56	50	45	65	55	41	47	66	57	55	63	62	58	58	57	52	43	48	50	47	46	62	59	63	70	68	60	62	59	54	55.9
Flemington.....	Maximum...	79	80	81	74	73	80	84	91	75	87	92	91	85	75	74	72	81	83	73	72	79	72	84	92	97	92	84	74	80	81	81.2
	Minimum...	54	52	45	58	55	44	47	65	58	57	60	63	58	59	47	53	47	48	51	48	48	64	62	66	67	70	61	63	58	58	56.2
Highwood.....	Maximum...	75	75	78	70	74	76	84	84	70	85	90	89	84	76	68	71	78	75	69	73	73	70	77	87	91	83	76	68	79	75	77.4
	Minimum...	55	47	45	59	54	40	48	64	57	57	54	62	56	55	58	52	42	49	49	48	46	60	59	64	65	63	59	58	58	54	54.6
Jersey City.....	Maximum...	79	80	82	75	78	79	85	88	69	86	92	94	83	75	70	73	78	76	72	75	77	70	77	88	95	87	81	69	82	80	79.8
	Minimum...	62	59	57	62	58	51	56	68	58	58	66	71	65	65	58	55	52	58	58	50	56	62	64	65	70	71	67	62	60	60	60.8
Lambertville.....	Maximum...	75	82	79	79	79	81	86	94	81	89	86	85	88	80	75	76	83	86	77	77	82	78	87	96	96	89	88	82	80	79	83.2
	Minimum...	55	52	47	61	57	45	49	65	60	58	61	65	61	61	58	57	48	54	55	49	51	65	64	68	69	72	64	65	61	59	58.5
Newark.....	Maximum...	78	77	82	69	75	80	85	91	76	86	92	93	85	77	73	72	80	74	71	74	76	73	82	97	95	87	80	75	80	78	80.2
	Minimum...	59	60	54	54	48	51	55	69	59	56	67	72	65	65	57	54	52	56	54	49	55	62	63	64	69	72	65	60	57	59	59.4
New Brunswick.....	Maximum...	76	75	80	69	72	75	83	90	65	83	89	92	82	71	70	69	76	75	70	71	75	72	79	92	93	89	80	65	82	79	78.0
	Minimum...	56	55	46	59	56	44	51	59	54	54	62	64	60	60	56	52	47	50	51	48	47	62	60	63	66	64	61	58	57	58	56.0
Paterson.....	Maximum...	78	79	81	78	77	78	85	90	72	88	92	94	85	81	76	73	79	79	70	73	76	73	80	96	94	89	79	71	80	77	80.8
	Minimum...	59	53	52	60	56	48	52	68	58	51	61	66	61	62	58	54	49	52	52	48	51	61	62	65	67	69	64	61	59	57	57.9
Plainfield.....	Maximum...	77	75	80	70	73	75	83	91	70	84	92	84	74	68	71	75	79	73	70	76	70	80	92	92	87	80	70	80	76	78.5	
	Minimum...	54	53	46	59	57	48	51	66	57	66	59	64	60	60	57	53	50	50	51	48	47	63	61	64	67	71	62	60	58	58	57.0
Somerville.....	Maximum...	84	78	81	78	74	78	85	91	79	86	91	94	85	83	74	71	80	81	73	73	79	72	81	93	95	90	88	72	80	80	81.6
	Minimum...	50	51	42	57	55	42	44	64	57	56	58	60	56	57	56	53	41	47	49	48	46	63	60	64	67	67	60	61	57	57	54.8
South Orange.....	Maximum...	76	76	80	69	72	75	83	87	69	89	87	90	82	75	66	69	75	76	71	71	75	71	77	90	91	85	79	68	78	78	77.7
	Minimum...	57	54	52	59	56	51	50	68	57	56	67	65	61	62	58	59	47	51	52	48	50	62	61	63	68	68	76	60	60	57	58.2
New York, N. Y.....	Maximum...	75	74	77	69	71	72	80	83	67	81	87	89	81	74	66	68	73	70	67	69	73	69	75	85	93	85	78	65	78	75	75.5
	Minimum...	61	61	58	61	56	53	56	64	56	55	70	70	65	62	55	54	52	58	59	48	58	62	62	63	69	67	65	58	58	59	59.9
<i>The Southern Interior.</i>																																
Bridgeton.....	Maximum...	87	79	86	76	79	80	87	95	77	89	95	97	89	75	83	78	82	84	83	78	81	82	91	97	98	84	95	90	89	85	86.0
	Minimum...	52	56	48	64	59	46	52	64	57	57	66	65	65	60	59	55	46	50	59	54	53	65	64	65	68	71	65	69	65	59	59.3
Burlington.....	Maximum...	82	80	83	75	77	77	87	95	78	87	93	96	88	78	72	75	79	83	76	72	77	76	86	93	93	91	90	75	83	80	82.6
	Minimum...	56	55	49	41	57	46	49	66	57	56	63	65	62	62	57	56	47	51	55	49	50	63	64	66	66	72	63	65	60	59	57.6
Clayton.....	Maximum...	81	80	80	76	77	76	82	98	75	90	92	98	83																		



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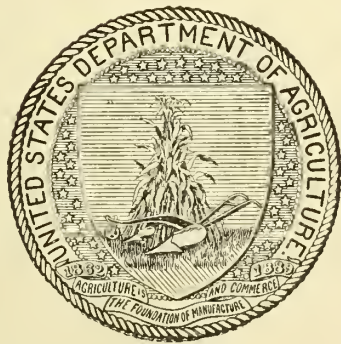
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U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU
CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA
NEW JERSEY SECTION

JULY, 1914

BY
G. HAROLD NOYES
SECTION DIRECTOR



TRENTON, N. J.
WEATHER BUREAU OFFICE
AUGUST 18, 1914.

Departure of the Mean Temperature from the Normal, July, 1914.



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Section Director.

VOL. XXVII.

TRENTON, N. J., JULY, 1914.

No. 7.

GENERAL SUMMARY.

July, ordinarily averaging three to five degrees warmer than June in New Jersey, passes from temperature commonly denominated "temperate" to several degrees above that standard. In July, 1914, however, the increase in heat over June was not as great as usual, with a consequent beneficial result in general personal comfort. The skies were overcast much of the time, thus further ameliorating the usual discomfort of mid-summer. Together with the subnormal temperature, the deficiency of rain, accumulating from the commencement of the growing season, continued well into the middle of the month, but was then terminated by successive days of rain. Had there been excessive heat and sunshine with the lack of rain, the result doubtless would have been grave for agriculture. Previous drought conditions were rapidly overcome the latter half of the month by copious amounts of rain over the whole State, except the southern half of Cape May County, and the southwestern half of both Salem and Cumberland counties, where agriculture suffered. The weather of the month, as a whole, then, was generally favorable for practically all pursuits, and the condition of crops at the close of the month was above the average.

The warmest days of the month were the 12th, 13th, 16th, 17th, 18th, 23d, 26th, and 27th. The coldest days were the 1st, 3d to 8th, 20th, and 28th to the close of the month. Some of the last four cold days were colder than ever before recorded on similar dates. The northern counties and the immediate shore line averaged from four to six degrees cooler than the southwestern portion of the State.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 34 stations, was 71.5°, which was 2.3° below normal. This is the lowest State average recorded since 1895, 1891, and 1888. In 1909 it was within 0.1° as cold as this year. The warmest year was 1901, when it was 77.3°. The coast and northern highlands averaged a fraction over seventy degrees, and the remainder of the State was slightly under seventy-two. The extreme highest temperature, 97° at Bridgeton, was not as high as the extreme highest for either May or June, 98°. The lowest temperature was 40° at Charlotteburg on the 20th; on this date there were also many other readings of considerably under fifty. The greatest range in any one day's temperature was 40° at Somerville, which is unusually large for the season of the year. The lowest monthly temperature occurred at Charlotteburg, which is over seven hundred feet above sea level. The highest monthly mean occurred at Bridgeton, Cumberland County, which is less than fifty feet above the sea. Temperatures at each station within the State and along the boundaries of adjoining states were invariably below the monthly normal, the greatest negative departure being 4.5° at Imlaystown.

PRECIPITATION.

The average rainfall for the State, as deduced from observations of 43 stations, was 6.05 inches, which was 1.17 inches

above normal. The greatest amount was 8.57 inches at Had-donfield, closely followed by 8.54 at Clayton. The least was 1.94 inches at Cape May. This is the largest rainfall record for July since 1897, 1889, and 1887. The driest July was in 1910. Over some portion of the State, 19 days were generally rainy, the average number of days on which a measurable quantity of water fell being 15. The principal days on which no rain fell were the 3d, 4th, 8th, 9th, 10th, and the 18th to 22d, inclu-sive. Nearly all the rain fell in connection with thunderstorms, some of which were of marked violence, with gales and hail. The greatest amounts in 24 consecutive hours were considerably over three inches, and these high records were noted along a line extending from near Camden to Atlantic City. The great-est number of rainy days was 19 at Culvers Lake and Phillips-burg, and the least number was 10 at Charlotteburg.

WIND.

The wind was variable in direction and light in velocity, the principal directions recorded being south and southwest. Sev-eral stations in central portions of the State, including Trenton, averaged northeast. The average velocity of the wind was ap-proximately nine miles per hour. The highest wind velocity for a period of five minutes was 72 miles per hour from the northeast at Trenton, and was the cause of considerable dam-age. In the vicinity of Jersey City, on the 23d, a violent thun-der squall was unusually destructive of life and property, and followed but a few minutes after the occurrence of the highest temperature for the month.

SUNSHINE AND CLOUDINESS.

Sunshine was deficient in the northern portion of the State, but increased to the southward. The average number of clear days was 9; partly cloudy, 11; and cloudy, 11. The number of cloudy days exceeded along the coast.

MISCELLANEOUS PHENOMENA.

Thunderstorms in some portion of the State occurred on all but seven days of the month; these days being the 3d, 4th, 6th, 8th, 9th, and 31st. Light hail accompanied the storms in vari-ous sections of the State on the 11th, 12th, 21st, 23d, 25th, 27th, 28th, and 29th. Solar halos were observed on the 8th, 12th, 22d, and 23d. Fog prevailed over portions of the State on the 9th, 10th, 11th, 12th, 15th, and 16th. The atmospheric pressure, reduced to sea level, averaged 29.9 inches, which was slightly above normal. Relative humidity was about eighty per cent, which is close to normal.

COMPARATIVE DATA FOR JULY.						
Year.	Temperature.			Average Precipitation.		
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.
1885.....	75.2	100	44	3.50	7.28	1.29
1886.....	73.0	98	48	4.91	7.95	2.98
1887.....	77.1	102	54	7.67	15.29	1.95
1888.....	71.1	95	45	3.50	7.03	1.25
1889.....	73.4	95	48	10.19	18.58	4.66
1890.....	72.5	101	39	5.62	7.55	3.60
1891.....	70.1	95	43	5.30	9.41	3.03
1892.....	74.3	105	44	4.03	7.96	2.38
1893.....	73.9	102	40	2.72	4.63	1.26
1894.....	75.7	106	44	1.66	5.00	0.15
1895.....	70.9	99	41	4.26	7.73	1.53
1896.....	75.0	98	47	5.50	13.29	2.45
1897.....	74.1	102	50	11.42	20.80	6.11
1898.....	75.3	107	38	4.96	11.72	2.23
1899.....	74.7	98	38	5.75	9.02	3.34
1900.....	75.9	104	42	4.74	7.21	1.11
1901.....	77.3	107	45	5.87	10.92	1.89
1902.....	73.0	100	43	4.78	9.92	1.83
1903.....	73.3	100	38	5.51	10.14	3.08
1904.....	72.3	98	42	4.87	8.06	2.41
1905.....	74.4	102	42	4.06	8.19	1.67
1906.....	72.8	94	46	5.58	13.25	3.44
1907.....	73.6	96	40	2.62	6.42	0.95
1908.....	75.6	106	42	4.70	8.12	1.97
1909.....	71.6	99	36	2.12	4.03	1.03
1910.....	75.3	99	42	1.36	5.33	0.22
1911.....	76.0	104	42	3.64	6.46	2.06
1912.....	73.7	100	36	3.86	9.91	1.01
1913.....	74.4	100	41	2.52	4.72	1.50
1914.....	71.5	97	40	6.05	8.57	1.94

Climatological data for July, 1914.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.			Prevailing direction of wind.	Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation .01 in. or more.	Clear.			Pt. cloudy.	Cloudy.
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	23	71.4	-1.3	95	27	50	20	33	6.13	+0.53	1.20	0	17	16	10	5	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	22	68.2	-1.3	91	23	40	20	39	6.41	+1.53	1.45	0	10	13	13	5	nw.	George S. Briggs.
Culvers Lake.....	Sussex.....	848	13	.....	.....	.....	.....	46	20	.....	4.89	+0.13	1.14	0	19	14	11	6	e.	Brice E. Riker.
Dover.....	Morris.....	600	30	68.4	-3.0	88	†12	46	20	35	7.55	+2.07	2.72	0	16	0	15	16	.....	William C. Harris.
Layton.....	Sussex.....	550	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. A. A. Ranson.
Newton.....	Sussex.....	678	34	70.1	-1.8	92	23	50	20	36	6.62	+1.92	1.61	0	15	4	5	22	sw.	F. Vernon Losee.
Phillipsburg.....	Warren.....	363	32	72.4	-1.6	93	23	51	20	36	6.27	+1.42	1.19	0	19	13	10	8	sw.	D. Wilson Smith.
Sussex.....	Sussex.....	442	24	70.6	-1.1	90	12	46	20	35	4.36	-1.16	1.00	0	14	13	8	10	sw.	George Dymock.
Means and extremes.....				70.2	-1.7	95	27	40	20	39	6.03	+1.06	2.72	0	16	10	10	10	sw.	
<i>The Red Sandstone Plain.</i>																				
Bayonne.....	Hudson.....	50	24	71.8	-2.6	94	†23	56	†7	31	5.37	-0.24	1.64	0	17	6	10	15	s.	Erskine R. Eadie.
Bergen Point.....	Hudson.....	37	17	70.6	-2.8	92	23	54	20	31	7.26	+1.75	2.03	0	15	3	19	9	se.	William H. Mitchell.
Boonton.....	Morris.....	239	24	.....	.....	.....	.....	.....	.....	.....	5.32	-0.14	1.09	0	14	.....	.....	.....	.....	J. W. Demmers.
Chatham.....	Morris.....	234	12	.....	.....	.....	.....	.....	.....	.....	6.33	+1.05	1.30	0	18	.....	.....	.....	.....	M. A. Butler.
Elizabeth.....	Union.....	45	35	73.0	-2.5	96	23	52	†1	39	6.55	+1.29	2.24	0	17	5	14	12	w.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	26	72.2	-1.7	94	23	52	†1	36	5.61	+0.65	1.72	0	14	12	8	11	e.	Hiram E. Deats.
Highwood.....	Bergen.....	90	25	69.6	-2.9	89	†17	48	20	35	5.88	+0.51	2.29	0	13	6	16	9	e.	Charles J. Bates.
Jersey City.....	Hudson.....	10	15	73.3	-1.4	95	23	57	7	30	7.02	+2.24	2.15	0	16	4	16	11	s.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	95	27	73.8	-0.7	94	26	55	†1	29	4.79	-0.25	1.34	0	13	5	21	5	sw.	Samuel W. Cochran.
Little Falls.....	Passaic.....	175	11	.....	.....	.....	.....	.....	.....	.....	6.59	+1.00	1.16	0	15	.....	.....	.....	.....	A. Sweetman.
Mahwah.....	Bergen.....	312	12	.....	.....	.....	.....	.....	.....	.....	6.89	+1.52	1.70	0	15	.....	.....	.....	.....	Chas. L. Barker.
Newark.....	Essex.....	159	72	72.9	-1.4	95	23	56	†7	31	7.39	+2.66	2.70	0	18	7	5	19	se.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	139	61	71.6	-2.7	92	†23	52	†1	30	5.33	+0.28	1.45	0	16	16	9	6	sw.	Earle C. Stillwell.
Paterson.....	Passaic.....	80	43	72.3	-2.0	92	†17	54	†20	31	4.76	-0.57	1.04	0	16	4	17	10	s.	Heber A. Probert.
Plainfield.....	Union.....	100	28	71.3	-2.6	94	23	51	20	37	7.59	+2.19	2.43	0	16	5	14	12	sw.	John Neagle.
Pompton Plains.....	Morris.....	195	12	.....	.....	.....	.....	.....	.....	.....	6.30	+0.75	1.43	0	16	.....	.....	.....	.....	M. S. Taylor.
Somerville.....	Somerset.....	60	31	71.8	-2.1	95	23	48	1	40	5.67	+0.54	2.10	0	15	10	9	12	n.	A. A. Macdonald.
South Orange.....	Essex.....	200	44	70.8	-2.3	90	23	54	1	32	7.31	+2.19	1.84	0	15	7	8	16	s.	Dr. W. J. Chandler.
New York, N. Y.....		365	44	71.1	-2.4	90	23	54	7	24	5.13	+0.59	1.61	0	15	5	7	19	s.	U. S. Weather Bureau.
Means and extremes.....				71.9	-2.1	96	23	48	†1	40	6.22	+0.99	2.70	0	16	7	13	11	s.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	33	74.2	-2.9	97	23	55	20	32	3.70	-0.73	1.97	0	12	14	6	11	w.	Henry A. Jorden.
Burlington.....	Burlington.....	12	*28	73.0	.....	95	23	54	20	32	6.02	+0.99	1.77	0	11	16	7	8	nw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	18	.....	.....	.....	.....	54	30	.....	8.54	+4.27	3.61	0	16	14	7	10	sw.	George L. Wilson.
Haddonfield.....	Camden.....	75	27	72.8	-2.7	94	23	53	20	32	8.57	+4.27	2.61	0	15	5	19	7	ne.	Chas. F. Richardson.
Hammononton.....	Atlantic.....	103	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Joseph E. Abbott.
Hightstown.....	Mercer.....	135	22	71.3	-2.7	94	23	51	28	36	4.91	-1.06	1.11	0	16	12	5	14	sw.	Leon Dunbar.
Imlaystown.....	Monmouth.....	18	26	70.7	-4.5	93	23	50	20	35	6.02	+1.00	1.35	0	18	12	7	12	s.	H. E. Bullock.
Indian Mills.....	Burlington.....	76	25	71.6	-3.5	96	23	49	20	36	6.97	+2.91	2.61	0	15	7	15	9	ne.	James M. Armstrong.
Lakewood.....	Ocean.....	54	11	72.0	-1.1	92	23	49	1	33	4.92	+0.45	1.55	0	17	5	9	17	.....	R. W. Holman.
Moorestown.....	Burlington.....	75	52	71.9	-2.9	92	23	53	†6	29	8.10	+3.52	3.22	0	13	8	18	5	nw.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	7	.....	.....	.....	.....	.....	.....	.....	5.69	.....	3.74	0	18	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	16	.....	.....	.....	.....	.....	.....	.....	5.92	+1.78	3.77	0	14	12	12	7	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	43	72.0	-2.5	93	23	56	30	28	4.75	-0.02	1.35	0	16	6	8	17	ne.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	21	72.0	-2.1	91	26	49	20	38	6.66	+2.76	2.45	0	16	9	11	11	se.	Frank R. Austin.
Vineland.....	Cumberland.....	118	46	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Alfred Chalmers.
Woodbine.....	Cape May.....	43	23	69.6	-4.3	93	23	46	20	37	5.12	+1.10	1.62	0	15	18	4	9	.....	Prof. R. D. Maltby.
Philadelphia, Pa.....		117	44	74.2	-1.6	96	22	58	31	27	7.75	+3.42	2.27	0	13	6	9	16	sw.	U. S. Weather Bureau.
Means and extremes.....				71.9	-2.9	97	23	46	20	38	6.14	+1.63	3.77	0	15	11	9	10	ne.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	25	70.0	-2.9	94	23	53	31	31	5.32	-0.07	1.45	0	15	5	8	18	ne.	H. E. Denegar.
Atlantic City.....	Atlantic.....	16	41	70.6	-1.9	88	18	58	31	17	6.82	+3.04	2.03	0	16	4	10	17	sw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	36	71.6	-1.8	93	18	56	30	20	1.94	-1.84	0.62	0	15	5	18	8	s.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	7	70.1	.....	94	23	54	20	31	6.05	.....	1.85	0	16	10	3	18	s.	William D. Martin, Jr.
Means and extremes.....				70.6	-2.2	94	23	53	31	31	5.03	+0.42	2.03	0	15	6	10	15	s.	
Means for the State.....				71.5	-2.3	97	23	40	20	40	6.05	+1.17	3.77	0	15	9	11	11	sw-s.	

† On other dates also.

* Two years temperature record.

Estimated and incomplete data are not considered in means.

All other records within the State are used in determining the Section means, but the mean departures from normal temperature and precipitation are based only on records from stations that have 10 or more years of observations.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

Daily precipitation for July, 1914.																																		
Stations.	Day of month.																																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total.		
<i>The Highlands and Kittatinny Valley.</i>																																		
Belvidere.....	.55	1.02			.07		.68				.38	.05	.17	.39	.26	.02	.22														.05		6.13	
Charlottesville.....	1.45	T.			T.		1.17				.08	.45			.26							T.	.31	*	.36	.80		*	1.38	.15	T.		6.41	
Culvers Lake.....	.28	.91	.02		T.		.52	.04		.05	.21	.01		.30	.06	T.		T.				.12	.50	.15	.07	.45		.24	.90	.05	.01		4.89	
Dover.....	.98	.03			.09	*	1.73			.07			.02	*	.55	.05						.34		.48		.38		*	2.72	.02	.09		7.55	
Layton.....																																		
Newton.....	*	1.40	.33				1.13			.10			.01	.41	.01		.02					.30		.25		.64		.37	1.61	.01	.03		6.62	
Phillipsburg.....	.42	.21	.03	.05	.34	T.	.95			.01	.66	.05	.06	.15	.56	.06	.14					.10	.06	.02	.51	.02	.78	1.05	.02		.02		6.27	
Sussex.....	.21	1.00					.61				.25	.02		.27	.18							.40		.12		.32		.22	.50	.19	.07		4.36	
<i>The Red Sandstone Plain.</i>																																		
Rayonne.....	.10	1.64				.01	1.20				.72	.02	.08	.12	.09	.04					T.		.09	.06	.42		.18	.46	.13	.01		5.37		
Bergen Point.....	.11	1.92				T.	1.00				.50	.03	.13	.09	.38	.05					T.	1.10	.15		.85		.38	.50	T.	.07	T.	7.26		
Boonton II.....		.09	T.				.90	.08		T.				.72	.01	.02						.37		.19	.62	.02		.55	.73		.01	5.32		
Chatham II.....		1.30	.23	T.		.05	.73	.12				.05		.72	.08	.15	.07					.42		.27	.45	.05		.62	.80	.14	.08	6.33		
Elizabeth.....	*	2.42	T.			T.	1.16	T.			T.	.03		.34	.02	.05					T.	.30		.19	.75	T.	.02	1.02	.10	.15	T.	6.55		
Flomington.....	.13	1.04	T.		.09	T.	1.72			.25		.21	.20	.23	T.	.13							.20	.06	.54		.14	.67	T.			5.61		
Highwood.....	.17	2.12			T.	T.	1.27			.13	.30	.02	.08	.15	.01							.03	.12	.36	.03	.27		.05	.71	.06	T.	5.88		
Jersey City.....	.12	2.06	T.				.91			.24	.01	.11	.09	.19	T.							.25		.84		.74		.28	.41	.77	T.	7.02		
Lambertville.....	.12	1.22			.13	T.	.59				.23	.25	.36		.20							.06		T.	.47		.37	.76		.03		4.79		
Little Falls**.....	.53	.45				T.	1.16				.72	.03		.42	.22	.22						.32		.11		.94		.18	.73	.53		6.56		
Mahwah II.....		1.70	*	.10			.73	.20			.18	.70			.45		.15						.78		.25	.20	.15		.40	.90		6.89		
Newark**.....	1.00	1.81				.60	.50				.85	.35	.02	.13	.02	.03	.07					.09		.25		.56		.16	.70	.18	.07	7.39		
New Brunswick**.....		.19	.45		.02	.05	.70				.09	.15	.32	.08	.46								.10		.08		.96	.34	.20	T.		5.23		
Paterson.....	.10	1.02	T.		.12	T.	1.04			T.	.09	T.	.07	.46	.01	.12						*	.20	.08	.05	.50		.03	.70	.17	T.	4.76		
Plainfield**.....	.25	2.28	T.	T.	.02	.01	1.32			T.		T.		.24	.20	.36	.18					.02		.16		.68		1.02	.62	.21	.02	7.59		
Pompton Plains II.....		1.43	T.				1.22	.06			.07	.04		.65	.02	.04						.16		.57	.46	.01		.66	.84	.01	.06	6.30		
Somerville.....	.08	2.02			.06		1.26				.04		.38	.27	.01	.12							.07	.07	.38		.23	.60		.08		5.67		
South Orange.....	.12	1.84			T.		.95				.60			.10	.20	.41	.96					.35		.32	T.	.40		.30	.56	.15	.05	7.31		
New York, N. Y***.....	.28	1.38	T.			.02	1.12				.22	.10	T.	.17	.01	.06						.10		.20		.73		.25	.38	.11	T.	5.13		
<i>The Southern Interior.</i>																																		
Bridgeton.....	.12	.12	T.		.25		.38				.22	*	.15	.12										.05	T.	.30		.20	1.77	T.	.02		3.70	
Burlington.....	.15	1.48			.24		.35				.68		.10	.38	.92		.22							T.	.33			1.77	.08			6.02		
Clayton.....	.14	.51			.14	.01	.63				.08	.14	.07	2.06	.67	.01								.13	.27			3.61	.01	.06		8.54		
Haddonfield.....	.13	.60			.27	T.	.57				.04	T.	.09	1.17	2.35	.02	.46							T.	.06		.15		T.	2.61	.04	.01	8.57	
Hammonton.....																																		
Hightstown.....	.09	.69			.32		.59					.40	.33	.41	T.	.05						.10	.07	.08	.27		.36	1.11	.01	.03		4.91		
Imlaystown.....	.12	.35			.28	T.	.65				.10	.50	.30	.30	.05	.10						.15	.12	.05	.50		.30	1.00	.10	.05	T.	6.02		
Indian Mills.....	.19	.65			.19		.54				.10	.62	.25	.14	.10	T.								.72		.70	2.61	.08	.02			6.97		
Lakewood.....	.18	.92			.05	.05	.04	.55			T.	.18	.12	.05	.38	.02							.04	*	.19	.25		.57	.98	.30	.05		4.92	
Moorestown.....	.17	.90			.20		.38				T.	.02	.06	.28	3.22		.45							.05	.74			1.53	.10			8.10		
Northfield.....	.14	.08	.40		.08	.01	.18		.11		.06	.02	.04	T.	.13	.01									.06	.06	.03	.04	3.74		.50		5.69	
Pleasantville.....	.19	.36			.10	*	.20		.01		.06		.02	T.	.04	.01							T.	.09	.35		.04	3.77		.68		5.92		
Trenton***.....	.15	.59			.20	.02	.37					.08	.07	.60	.06	.32	T.					.20		.01	T.	.16		.50	.85	.57	T.	4.75		
Tuckerton.....	.30	.55			.02		.40				.04	2.45	.02	.02	.03									.03	.18		1.23	1.17	.03	.16	.03	6.66		
Vineland.....																																		
Woodbine.....	.14	.38			.10		.23		.25		.05		.04	.08	1.38	.11								.11	.03	.10		1.62		.50		5.12		
Philadelphia, Pa***.....	.31	1.56			.28	T.	.37				.02	.16	.05	1.16	.86	.65	T.						T.	T.	.16		13.2	0.4	T.	T.		7.75		
<i>The Sea Coast.</i>																																		
Asbury Park**.....	.21	.33			T.	.24	.71		.01		.01		.18	.06		.54	.05							.39		.62		.12	.40	1.45	T.	5.32		
Atlantic City***.....	.18	.41	T.		.09	.14	.20		.52	T.	.03	T.	.02	T.	.08		.01							.01	.09	1.04		.24	1.79	T.	1.97	T.	6.82	
Cape May City***.....	.08	.03			.18	.03	.03		T.		.08		.05	.05	T.	.04	.02								.62	.22			.40	.05	.05		1.94	
Long Branch**.....	.46	.48				.37	.81			T.	T.	.07	.05	.15	T.	.88	.06						.02		.18		.49		.06	1.85	.11	T.	.01	6.05

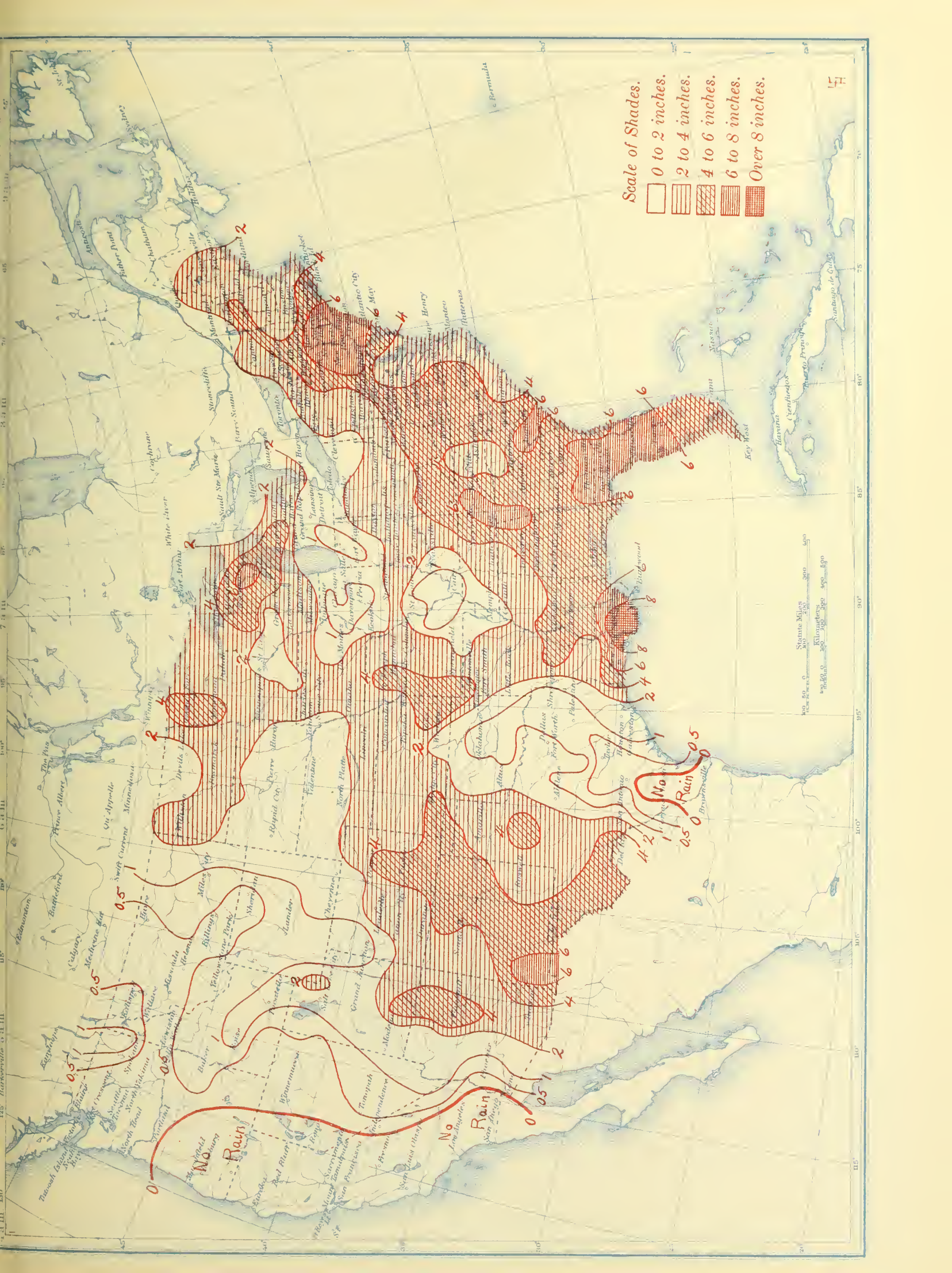
Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24 hour period, midnight to midnight.
II Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. † Separate dates of falls not recorded. ‡ Incomplete.
* Precipitation included in the next following measurement. **Precipitation for 24 hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.				Moist- ure.	Sun. shine.
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, percentage.	Percentage of possible sunshine.
							Miles per hour.	Direction.	Date.		
Atlantic City.....	30.00	30.25	4	29.78	17	7	27	s.	1	82	60
Asbury Park.....	30.04	30.24	4	29.84	17						
Cape May.....	30.01	30.24	4	29.82	17	7	21	nw.	19	84	
Jersey City.....	29.99	30.23	31	29.75	17						
Long Branch.....	30.00	30.21	4	29.74	18	13	47	nw.	23	80	
Newark.....			4	29.64	17		40		23	87	
New York, N. Y.....	29.98	30.20	4	29.72	17	12	88	nw.	23	73	41
Philadelphia, Pa.....	29.99	30.25	4	29.75	17	8	36	ne.	29	76	40
Trenton.....	29.97	30.21	4	29.73	17	9	72	ne.	27	78	48

Daily temperatures for July, 1914.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean		
<i>The Highlands and Kittatinny Valley.</i>																																		
Belvidere.....	Maximum ...	70	81	78	81	80	75	68	85	85	80	85	91	85	73	80	84	89	89	79	83	86	85	90	82	82	86	95	69	75	72	76	81.	
	Minimum ...	52	59	57	60	60	62	57	59	63	69	65	62	67	69	62	70	68	74	62	50	61	57	57	68	66	64	62	59	53	52	56	61.	
Charlotteburg.....	Maximum ...	73	78	70	77	73	71	70	80	81	79	82	88	83	78	76	83	87	86	84	79	87	81	91	79	82	86	84	72	73	68	73	79.	
	Minimum ...	43	57	52	51	54	59	53	58	57	65	64	60	66	63	62	68	65	71	59	40	54	53	49	65	62	59	55	56	52	49	52	57.	
Dover.....	Maximum ...	73	79	68	79	68	71	65	81	80	71	81	88	83	72	74	82	85	86	76	79	86	81	88	75	81	87	85	64	71	65	70	77.	
	Minimum ...	48	58	56	58	59	60	55	59	61	66	67	68	65	64	69	67	56	56	46	56	56	53	66	64	63	60	57	52	57	54	*59.		
Layton.....	Maximum ...	77	82	78	83	76	75	71	87	87	82	86	91	86	80	79	87	91	90	85	83	90	87	93	82	88	91	91	70	77	70	77	83.	
	Minimum ...	53	60	57	60	62	61	58	59	63	69	65	66	67	68	62	69	68	74	64	51	61	61	57	70	66	64	64	59	53	56	61.		
Sussex.....	Maximum ...	74	80	74	86	85	75	67	84	86	85	85	90	87	79	78	85	88	86	81	79	89	81	89	84	85	86	88	73	72	78	81.		
	Minimum ...	48	58	54	58	50	60	55	60	60	68	66	62	67	66	60	70	69	71	63	46	59	56	55	65	65	63	61	58	50	53	59.		
<i>The Red Sandstone Plain.</i>																																		
Bayonne.....	Maximum ...	74	83	68	79	73	72	72	81	77	73	77	90	87	74	82	87	89	91	82	84	90	87	94	76	79	94	82	69	75	70	74	80.	
	Minimum ...	57	61	60	59	61	60	56	63	65	66	65	66	70	68	66	69	71	75	67	56	65	62	63	67	65	68	68	60	56	57	57	63.	
Bergen Point.....	Maximum ...	76	81	67	77	67	73	71	81	77	74	78	86	85	73	80	86	88	90	80	81	88	82	92	76	77	90	78	69	74	67	73	78.	
	Minimum ...	56	60	55	59	59	60	56	62	62	62	65	65	69	68	66	69	70	79	68	54	63	62	61	66	64	66	67	59	57	58	56	62.	
Boonton.....	Maximum ...	72	81	66	70	70	70	78	78	69	69	86	81	70	73	78	83	83	83	76	76	78	87	78	78	82	82	70	66	72	70	77.		
	Minimum ...	46	58	54	58	64	52	58	60	62	60	64	65	68	60	64	64	68	64	46	46	46	46	46	46	46	46	46	46	46	46	46	46.	
Elizabeth.....	Maximum ...	78	84	69	82	75	76	74	87	88	84	85	92	89	77	84	91	93	94	93	85	91	88	96	82	83	94	88	75	78	70	77	84.	
	Minimum ...	52	61	60	59	59	55	60	68	67	66	66	69	68	67	68	70	82	58	54	59	57	57	57	57	57	57	57	57	57	57	57	57	57.
Flemington.....	Maximum ...	77	82	73	81	74	72	71	85	84	78	84	91	85	74	79	86	89	92	81	84	90	87	94	83	85	93	90	69	74	68	75	81.	
	Minimum ...	52	61	61	60	62	59	56	59	62	68	67	68	68	70	69	69	69	75	67	52	61	63	58	69	65	65	64	60	55	55	55	55.	
Highwood.....	Maximum ...	73	82	65	78	74	70	68	80	80	73	81	86	83	75	78	87	89	89	79	83	88	80	85	78	79	88	83	66	71	62	71	78.	
	Minimum ...	50	60	58	57	59	58	56	60	62	67	65	63	69	66	65	69	71	74	63	48	62	57	55	65	64	64	60	60	51	57	56	61.	
Jersey City.....	Maximum ...	79	83	69	78	75	74	72	83	82	77	83	92	88	78	83	89	89	92	79	84	91	87	95	78	79	93	86	70	76	68	76	81.	
	Minimum ...	60	61	60	60	61	61	57	64	67	67	67	68	73	70	68	68	73	77	69	58	67	65	65	68	66	69	70	62	58	60	58	65.	
Lambertville.....	Maximum ...	77	82	76	83	73	74	70	83	89	81	87	86	86	79	76	90	91	92	87	85	93	90	92	84	85	94	87	76	71	78	83.		
	Minimum ...	55	63	62	62	64	60	59	62	65	70	68	69	67	70	68	70	70	76	68	56	65	64	63	72	67	68	68	63	57	55	57	64.	
Newark.....	Maximum ...	77	83	72	78	74	73	71	84	80	76	83	90	86	81	79	89	92	92	84	84	91	86	95	79	76	92	87	71	74	74	76	81.	
	Minimum ...	57	69	59	59	60	61	56	64	66	66	65	65	70	68	65	69	72	75	70	59	64	64	67	65	69	70	61	57	58	56	64.		
New Brunswick.....	Maximum ...	76	82	67	88	71	70	71	84	79	77	82	90	86	73	80	86	88	90	78	82	84	87	92	79	80	92	88	67	75	72	83	80.	
	Minimum ...	52	61	59	59	60	59	55	61	64	63	65	68	68	69	66	69	70	72	63	52	62	64	62	65	64	67	65	61	56	56	56	62.	
Paterson.....	Maximum ...	76	83	71	78	74	73	72	85	82	77	85	90	88	82	79	88	92	92	84	83	92	87	91	81	82	92	87	70	75	69	76	81.	
	Minimum ...	56	60	59	58	60	60	56	61	65	67	66	66	71	68	65	70	76	66	54	62	61	60	67	65	65	66	60	54	56	56	62.		
Plainfield.....	Maximum ...	78	81	67	79	71	73	72	83	80	76	81	90	86	74	81	86	90	89	80	81	88	91	92	93	84	91	92	71	76	74	70	80.	
	Minimum ...	54	60	61	60	60	61	56	60	64	65	66	68	69	69	66	69	70	74	65	51	61	61	57	68	64	65	65	60	54	56	56	62.	
Somerville.....	Maximum ...	79	81	70	79	71	73	73	83	83	79	84	95	93	84	83	88	91	92	93	84	90	87	95	83	83	92	91	72	76	71	76	82.	
	Minimum ...	48	59	60	59	59	59	56	58	62	65	65	68	66	66	66	67	74	63	49	58	55	55	68	63	63	62	60	54	52	54	60.		
South Orange.....	Maximum ...	72	80	65	77	72	72	70	82	79	74	81	88	84	75	79	89	89	87	75	80	87	81	90	79	80	87	87	67	72	69	72	78.	
	Minimum ...	54	60	60	60	60	60	56	62	64	68	66	67	70	67	66	70	70	70	61	55	62	62	58	67	65	69	67	60	57	58	56	62.	
New York, N. Y.....	Maximum ...	75	80	64	73	72	73	68	79	76	73	78	88	85	73	80	86	88	86	76	80	86	82	90	77	77	88	84	71	72	72	72	81.	
	Minimum ...	61	59	58	59	61	59	54	65	66	65	64	68	70	67	66	68	73	75	67	59	66	67	66	67	65	71	68	61	58	59	57	64.	
<i>The Southern Interior.</i>																																		
Bridgeton.....	Maximum ...	81	86	76	68	73	72	76	86	85	80	86	93	88	80	93	92	94	94	81	87	90	89	97	88	90	92	95	80	77	67	73	84.	
	Minimum ...	56	65	60	57	60	59	57	62	66	66	66	68	68	67	69	72	75	73	66	55	65	66	65	72	65	70	68	65	56	56	56	64.	
Burlington.....	Maximum ...	81	83	78	79	71	75	70	85	84	81	83	90	87	75	85	86	91	92	85	83	89	85	95	85	83	91	92	72	75	70	73	82.	
	Minimum ...	56	61	61	60	61	59	59	60	65	65	65	66	68	69	70	70	71	74	66	54	62												



Scale of Shades.

- 0 to 2 inches.
- 2 to 4 inches.
- 4 to 6 inches.
- 6 to 8 inches.
- Over 8 inches.

Scale Miles
0 100 200 300 400 500
Kilometers
0 100 200 300 400 500

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WEATHER BUREAU

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CLIMATOLOGICAL DATA

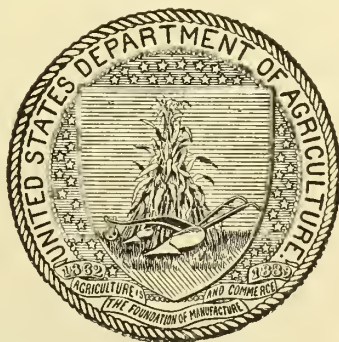
NEW JERSEY SECTION

AUGUST, 1914

BY

G. HAROLD NOYES

SECTION DIRECTOR



TRENTON, N. J.
WEATHER BUREAU OFFICE
SEPTEMBER 18, 1914.

Departure of the Mean Temperature from the Normal, August, 1914.



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Section Director.

VOL. XXVII.

TRENTON, N. J., AUGUST, 1914.

No. 8.

GENERAL SUMMARY.

August weather in New Jersey has been unusually pleasant owing to a deficiency of rain and cloudiness, and not too great heat, although temperatures averaged about a degree above normal. The thermometer frequently reaches 100° in this month, but this year 98° was the highest recorded. August "dog days", when temperature and humidity are both excessive, were not so frequent as heretofore, and the general personal feeling of discomfort was considerably mitigated. The days of rainfall were fairly evenly distributed through the month, so that there was but little unfavorable effect on vegetation owing to the reduced amount, and nearly all out-door pursuits were more than ordinarily favored by the pleasant weather. The first week of August was slightly below normal in heat, but from the 7th to the 12th and from the 15th to the 24th, and the last three days temperatures averaged above normal. The 9th, 19th and 24th were the warmest days and the 26th was the coolest. Nearly all of the rainfall attended thunderstorms, some of which were severe. The storm of the 21st did some damage both by hail and lightning, but there was little ill effect from wind. The lack of rain became gradually more and more apparent in the grass which browned somewhat, but all vegetation under cultivation presented a very favorable aspect. The general crop situation at the close of the month was definitely better than in recent years.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 34 stations, was 73.3°, which was 1.3° above normal. Stations along the coast averaged but a half degree above normal, and the difference between the northern highlands and southern interior was less than four degrees. The highest temperature of the month, 98°, occurred at several stations on the 19th, and equalled the previous high records of May and June this year. The lowest temperature was 42° at Culvers Lake on the 26th. The greatest daily range in any one day's temperature was 39°. The highest monthly mean temperature was 76.4° at Bridgeton and the lowest was 69.2° at Charlotteburg. Asbury Park and New Brunswick temperatures were slightly under normal; all other stations showed a positive departure.

PRECIPITATION.

The average rainfall for the State, as deduced from observations of 44 stations was 3.15 inches, which was 1.87 inches below normal. The greatest amount was 6.53 inches at Woodbine

and the least was 1.04 inches at Hightstown. The principal rainy days were the 2d, 3d, 8th, 11th, 12th, 20th, 21st, 28th 29th, 30th, although there was practically no rain in the southern half of the State on the 8th and 20th. Amounts exceeding an inch occurred at a number of stations on the 11th, 21st and 29th. The greatest rainfall in any 24 consecutive hours was 2.65 inches at Flemington. In the extreme southeastern section of the State, the rainfall was considerably above normal; the greatest deficiency was 3.86 inches at Paterson.

WIND.

The prevailing wind direction was southwest and light, averaging about 9 miles per hour or near normal. The highest wind velocity recorded was 38 miles per hour from the northwest on the 2d, at Trenton. Winds of considerable strength occurred elsewhere on the 17th, 21st and 29th.

SUNSHINE AND CLOUDINESS.

The number of clear and partly cloudy days was unusually large, over the greater portion of the State, and sunshine was somewhat greater than usual. The average number of clear days was 13, partly cloudy 12, and cloudy 6. The greatest cloudiness was reported from coast stations.

MISCELLANEOUS PHENOMENA.

Atmospheric pressure, reduced to sea level, was 30.02 inches which is about 0.05 inches below normal. Relative humidity averaged about 75% which was approximately normal. The principal days on which thunderstorms occurred were, the 2d, 3d, 8th, 11th, 19th, 20th, 21st and 29th. Hail was reported on the 3d, 9th, 20th and 21st. No optical phenomena of note were observed.

COMPARATIVE DATA FOR AUGUST.

Year.	Temperature.			Average Precipitation.		
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.
1885.....	71.7	95	40	6.11	10.09	3.47
1886.....	69.5	96	42	2.81	5.36	1.10
1887.....	70.4	94	42	3.76	7.34	2.09
1888.....	72.5	98	41	6.13	10.53	2.55
1889.....	69.6	91	45	5.13	9.06	1.93
1890.....	71.5	99	40	4.90	7.51	2.89
1891.....	72.8	100	46	5.32	8.89	2.58
1892.....	73.4	99	46	3.63	5.65	0.72
1893.....	72.8	98	38	6.52	11.94	3.55
1894.....	70.9	97	44	2.58	9.28	0.15
1895.....	74.2	102	34	2.53	5.06	0.02
1896.....	73.6	105	39	1.83	3.27	0.50
1897.....	71.0	91	41	4.39	8.69	2.07
1898.....	74.8	98	42	5.36	9.28	2.70
1899.....	72.3	99	39	4.36	9.70	2.16
1900.....	76.3	104	41	2.68	4.56	0.70
1901.....	73.8	98	44	9.43	15.80	4.88
1902.....	70.1	93	40	3.91	10.67	1.31
1903.....	68.4	98	39	6.95	14.54	4.30
1904.....	70.8	92	37	6.62	13.01	2.65
1905.....	71.1	95	38	5.72	9.88	3.51
1906.....	74.6	97	42	5.95	17.91	2.21
1907.....	70.5	96	39	3.45	7.61	1.79
1908.....	70.6	103	36	5.05	9.23	2.43
1909.....	70.2	100	34	4.59	12.94	1.41
1910.....	70.4	92	36	3.78	8.46	1.76
1911.....	72.1	101	39	8.91	14.74	5.31
1912.....	70.0	95	35	3.42	7.62	1.19
1913.....	71.7	100	38	4.06	10.21	1.93
1914.....	73.3	98	42	3.15	6.53	1.04

Climatological data for August, 1914.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.							Precipitation, in inches.				No. of days.				Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation .01 in. or more.	Clear.	Pt. cloudy.	Cloudy.		Prevailing direction of wind.
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	23	71.0	+0.2	90	9	53	26	27	2.88	-2.08	1.06	0	10	18	11	2		Samuel J. Hixson. George S. Briggs. Brice E. Riker. William C. Harris. Dr. A. A. Ranson.
Charlotteburg.....	Passaic.....	719	22	69.2	+1.5	92	†9	46	16	35	1.89	-2.86	0.85	0	6	25	5	1	nw.	
Culvers Lake.....	Sussex.....	848	13	.....	.....	.....	.....	42	26	.....	1.72	-2.81	0.59	0	11	21	6	4	e.	
Dover.....	Morris.....	600	30	69.4	+0.2	90	9	52	†14	28	2.10	-2.90	0.67	0	8	0	20	1†	.....	
Layton.....	Sussex.....	550	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Newton.....	Sussex.....	678	34	70.8	+1.0	90	†6	52	†25	30	2.69	-1.72	0.63	0	11	11	7	13	sw.	F. Vernon Losee. D. Wilson Smith. George Dymock.
Phillipsburg.....	Warren.....	363	32	73.0	+1.3	96	9	54	27	29	3.40	-1.30	1.60	0	10	18	9	4	.....	
Sussex.....	Sussex.....	442	24	71.2	+1.6	93	20	49	25	31	1.73	-2.59	0.49	0	10	.....	.....	.....	sw.	
Means and extremes.....				70.8	+1.0	96	9	42	26	35	2.34	-2.32	1.60	0	9	15	10	6	sw.	
<i>The Red Sandstone Plain.</i>																				
Bayonne.....	Hudson.....	50	24	74.2	+1.3	96	19	57	†1	29	3.18	-1.93	1.72	0	8	15	6	10	sw.	Erskine R. Eadie. William H. Mitchell. J. W. Demmers. Miss M. A. Butler. L. B. Bonnett.
Bergen Point.....	Hudson.....	37	17	73.2	+1.5	93	19	57	1	26	3.27	-1.79	1.45	0	6	5	25	1	se.	
Boonton.....	Morris.....	400	24	.....	.....	88	19	46	26	.....	2.82	-2.57	0.83	0	9	18	10	3	sw.	
Chatham.....	Morris.....	234	12	.....	.....	.....	.....	.....	.....	.....	2.50	-2.42	0.73	0	9	.....	.....	.....	.....	
Elizabeth.....	Union.....	45	35	.....	.....	.....	.....	55	†1	.....	3.32	-1.22	1.53	0	8	14	10	7	sw.	
Flemington.....	Hunterdon.....	140	26	73.4	+1.6	98	19	54	†1	32	4.11	-0.30	2.65	0	8	16	12	3	w.	Hiram E. Deats. Charles J. Bates. S. K. Pearson, Jr. Samuel W. Cochran. Monclair Water Co.
Highwood.....	Bergen.....	90	25	71.6	+0.4	91	9	53	26	29	2.09	-2.98	0.85	0	6	7	13	11	sw.	
Jersey City.....	Hudson.....	10	15	75.4	+2.1	95	19	60	†26	25	2.80	-1.85	1.31	0	7	6	18	7	sw.	
Lambertville.....	Hunterdon.....	95	27	75.2	+2.8	97	9	57	†1	28	2.45	-2.31	0.68	0	6	6	24	1	sw.	
Little Falls.....	Passaic.....	180	11	.....	.....	.....	.....	.....	.....	.....	1.58	-3.53	0.50	0	11	12	1	18	w.	
Newark.....	Essex.....	159	72	74.7	+2.1	98	19	58	†1	27	2.34	-2.90	1.30	0	8	7	11	13	sw.	Prof. William Wiener. Earle C. Stillwell. Heber A. Probert. John Neagle. M. S. Taylor
New Brunswick.....	Middlesex.....	139	61	72.0	-0.4	95	19	53	29	34	1.88	-3.21	0.69	0	9	17	12	2	sw.	
Paterson.....	Passaic.....	80	43	74.2	+2.2	96	19	56	26	30	1.27	-3.86	0.37	0	10	4	21	6	sw.	
Plainfield.....	Union.....	100	28	73.0	+0.9	94	†9	54	1	29	2.01	-2.86	0.83	0	9	9	14	8	sw.	
Pompton Plains.....	Morris.....	195	12	.....	.....	.....	.....	.....	.....	.....	2.05	-3.03	0.70	0	9	.....	.....	.....	.....	
Somerville.....	Somerset.....	60	31	73.4	+1.5	98	19	52	27	39	2.47	-2.24	1.33	0	6	12	9	10	sw.	A. A. Macdonald. Dr. W. J. Chandler. U. S. Weather Bureau.
South Orange.....	Essex.....	200	44	72.6	+1.9	91	9	57	14	25	2.42	-2.97	1.31	0	6	10	17	4	w.	
New York, N. Y.....	.....	365	44	73.7	+1.5	95	19	59	1	22	2.18	-2.35	1.24	0	9	2	15	14	sw.	
Means and extremes.....				73.6	+1.5	98	19	46	26	39	2.50	-2.47	2.65	0	8	11	13	7	sw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	33	76.4	+1.3	98	†19	56	26	29	4.27	-0.47	1.16	0	10	15	9	7	sw.	Henry A. Jorden. D. S. B. McCoy. George L. Wilson. Chas. F. Richardson. Joseph E. Abbott.
Burlington.....	Burlington.....	12	*28	74.7	.....	96	19	58	†1	29	2.46	-3.15	1.46	0	7	25	3	3	sw.	
Clayton.....	Gloucester.....	126	18	75.1	+1.6	96	†9	55	26	30	4.11	-1.04	1.18	0	10	20	7	4	sw.	
Haddonfield.....	Camden.....	75	27	74.6	+1.7	95	†19	56	26	31	2.88	-1.71	0.69	0	9	10	15	6	sw.	
Hammonton.....	Atlantic.....	103	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Hightstown.....	Mercer.....	135	22	73.4	+1.5	95	19	55	†1	34	1.04	-3.73	0.38	0	6					Leon Dunbar. H. E. Bullock. James M. Armstrong. R. W. Holman. Geo. L. Gillingham.
Inlaystown.....	Monmouth.....	18	26	74.0	+0.9	96	19	54	†1	32	1.93	-2.93	0.40	0	6	13	13	5	sw.	
Indian Mills.....	Burlington.....	76	25	74.4	+1.3	97	19	54	†14	34	3.03	-2.14	0.88	0	10	13	14	4	sw.	
Lakewood.....	Ocean.....	54	11	72.6	.....	94	19	53	27	32	5.84	.....	1.79	0	9	6	13	12	sw.	
Moorestown.....	Burlington.....	75	52	74.3	+1.8	94	†9	57	†1	28	2.11	-2.63	1.13	0	8	15	16	0	sw.	
Northfield.....	Atlantic.....	25	7								5.32		1.11	0	11					William L. Flick. Lincoln Van Gilder. U. S. Weather Bureau. Frank R. Austin. Alfred Chalmers.
Pleasantville.....	Atlantic.....	26	16	.....	.....	.....	.....	.....	.....	.....	6.44	+1.75	2.01	0	11	21	7	3	.....	
Trenton.....	Mercer.....	190	43	74.4	+1.4	95	19	58	27	26	1.63	-3.74	0.75	0	7	7	14	10	sw.	
Tuckerton.....	Ocean.....	23	21	74.3	+2.1	96	19	56	†1	32	5.73	-0.05	2.09	0	8	16	12	3	sw.	
Vineland.....	Cumberland.....	118	46	75.2	+1.6	97	†9	55	25	30	5.20	+0.23	1.59	0	9	17	12	2	sw.	
Woodbine.....	Cape May.....	43	23	72.2	0.0	95	19	50	26	38	6.53	+2.23	2.30	0	9	20	5	6		Prof. R. D. Maltby. U. S. Weather Bureau.
Philadelphia, Pa.....	.....	117	44	76.2	+2.4	94	19	61	1	23	2.31	-2.30	1.18	0	11	6	14	11	sw.	
Means and extremes.....				74.4	+1.4	98	†19	50	26	38	3.90	-1.34	2.30	0	9	15	11	5	sw.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	25	71.8	-0.1	88	†19	60	†1	22	5.20	+0.06	1.63	0	12	6	9	16	se.	H. E. Denegar. U. S. Weather Bureau. U. S. Weather Bureau. William D. Martin, Jr.
Atlantic City.....	Atlantic.....	16	41	73.6	+1.0	92	24	61	1	22	4.72	+0.42	1.11	0	12	7	16	8	sw.	
Cape May City.....	Cape May.....	17	36	74.1	+0.7	94	24	58	26	24	4.59	+0.33	1.61	0	11	12	14	5	s.	
Long Branch.....	Monmouth.....	25	7	72.4	.....	93	24	58	†1	26	3.60	.....	1.43	0	13	10	12	9	s.	
Means and extremes.....				73.0	+0.5	94	24	58	†1	26	4.53	+0.27	1.63	0	12	9	13	9	s.	
Means for the State.....				73.3	+1.3	98	†19	42	26	39	3.15	-1.87	2.65	0	9	13	12	6	sw.	

† On other dates also.

* Two years temperature record.

Estimated and incomplete data are not considered in means.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining sections or division means.

T, precipitation is less than 0.01 inch rain or melted snow.

Daily precipitation for August, 1914.

Stations.	Day of month.																															Total.		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
The Highlands and Kittatinny Valley.																																		
Belvidere.....	.10	T.	.24					.18			.58	.07								.07	*	1.06								.35	.23		2.88	
Charlottesville.....		T.	.08					.05			*	.43								.38	.10									.85			1.89	
Chilvers Lake.....		T.	.03					.15		.01	.32	.01					.12	T.		.24	.35								.09	.22	.18		1.72	
Dover.....			.33					.02			.58								.05	.39	.28									*	.45		2.10	
Layton.....																																		
Newton.....			.16					.09		.05	.58						.01		.51	*	.44								.11	.41	.33		2.69	
Phillipsburg.....	.01		.34					.23			1.31	.41							.02	.65									.04	.33	.06	T.	3.40	
Sussex.....		.08	.05					.11		.02	.26							.08			.20	.31							.13	.49			1.73	
The Red Sandstone Plain.																																		
Bayonne.....			.29					.08			.45	.01	.08								1.72									.52	.03		3.18	
Bergen Point.....			.28							1.18	.06	.04					T.				1.45	T.						T.	.26				3.27	
Boonton II.....		.17	.18		.04						.83	T.								.04	.43	.27							.30	.56			2.82	
Chatham II.....			.22					.08	.05		.08	.42	T.								.40	.32							.50	.43			2.50	
Elizabeth.....			.36					.20			.35	.15	.25							1.53									.48	T.			3.32	
Flemington.....	.03		.11					T.			.18	.02								.08	2.65							T.	1.02	.02	T.		4.11	
Highwood.....		.05	.14					.02	.05		.66	T.					T.	T.	T.		.85							.04	.24	.04			2.09	
Jersey City.....	T.	.37	T.	T.				.03		T.	.43	.01							T.		.24	1.07								.65		T.		2.80
Lambertville.....			.37					T.			.44	.22									.67								T.	.68	.07			2.45
Little Falls**.....	.09		.12					.12			.23	.10							.04	.15	.35								.05	.26	.07			1.58
Newark **.....		.09	.04								.14	.03								.47	.24								T.	1.30	.03			2.34
New Brunswick**.....			.04	.15							.26						T.			.11	.58								*	.36	.04	.34		1.88
Paterson.....		.05	.07					T.		T.	.23	.08							.06	*	.37								.05	.21	.15			1.27
Plainfield **.....		.02	.19					T.	T.	T.	.32	.02					T.			.21	.62								.02	.36		.25		2.01
Pompton Plains II.....		.01	.12					.02			T.	.39								.03	.14	.18								.46	.70			2.05
Somerville.....			.22								.30	.19									1.33									.41	.02			2.47
South Orange.....		.02	.12					T.		T.	.30	T.					T.	T.		.30	.37								T.	1.31				2.42
New York, N. Y.***.....		.09	.11		T.		T.	.02		.02	.33	.01	T.						T.	.13	1.11								T.	.36	T.			2.18
The Southern Interior.																																		
Bridgeton.....			.55								.14	.77									.60				1.05				.46	.70			4.27	
Burlington.....			.25								.25	.15								1.46					T.				.05	.14	.16		2.46	
Clayton.....			.17		.01						.35	1.18	.01							1.03					.16				.36	.39	.45		4.11	
Haddonfield.....		T.	.32		T.					T.	.68	.34								.30					.07	.12			.10	.69	.26		2.88	
Hammonton.....																																		
Hightstown.....			.21		.06						.14										.38									.18	.07			1.04
Imlaystown.....			.33						T.		.20	.30	T.								.40								T.	.30	.40			1.93
Indian Mills.....			.25		.02						.18	.88									.41				.07	.14				.06	.45	.57		3.03
Lakewood.....		.19	T.	T.					.39	.13	.35	*	2.14								.50								T.	1.79	.35			5.84
Moorestown.....			.25								.75	.38									.49								T.	.15	.06			2.11
Northfield.....			.64								.09	.76					.62				.82	.36			.32	.42			.10	1.11	.08			5.32
Pleasantville.....		2.01									.10	.52					.41				1.20	.06		.01	.34	.35			.25	1.15	.04			6.44
Trenton***.....		.18	.05	T.	T.				.01		.19	T.									.75									.06	.39			1.63
Tuckerton.....			.98								.05	2.04					.48				.41								.57	.25	.95	T.		5.73
Vineland.....			.33								.21	1.59					.20				*	.85			.61	.22				1.19				5.20
Woodbine.....			.90	.07							.15	1.02	.03							2.30						.87			.17	1.02				6.53
Philadelphia, Pa.***.....		.36	.03	T.	T.				.06		.35	.07								1.18				.01	.01	.05			.11	.08				2.31
The Sea Coast.																																		
Asbury Park**.....	T.		.12	T.						.08	1.63	.14	.18								.98	*	1.00						.07	.94	.03	.03		5.20
Atlantic City***.....			1.00	T.						.08	.65	.47			T.		.20			.86				.19	.09	.19			.49	.48	.02			4.72
Cape May City***.....					.01	T.				.14	.01	.40					.81			.80				.35	.31	1.35			.29	.12				4.59
Long Branch**.....	T.	.05	.07	.12						.03	1.43	.28	.05		.02						.52								.10	.83	.02	.08		3.60

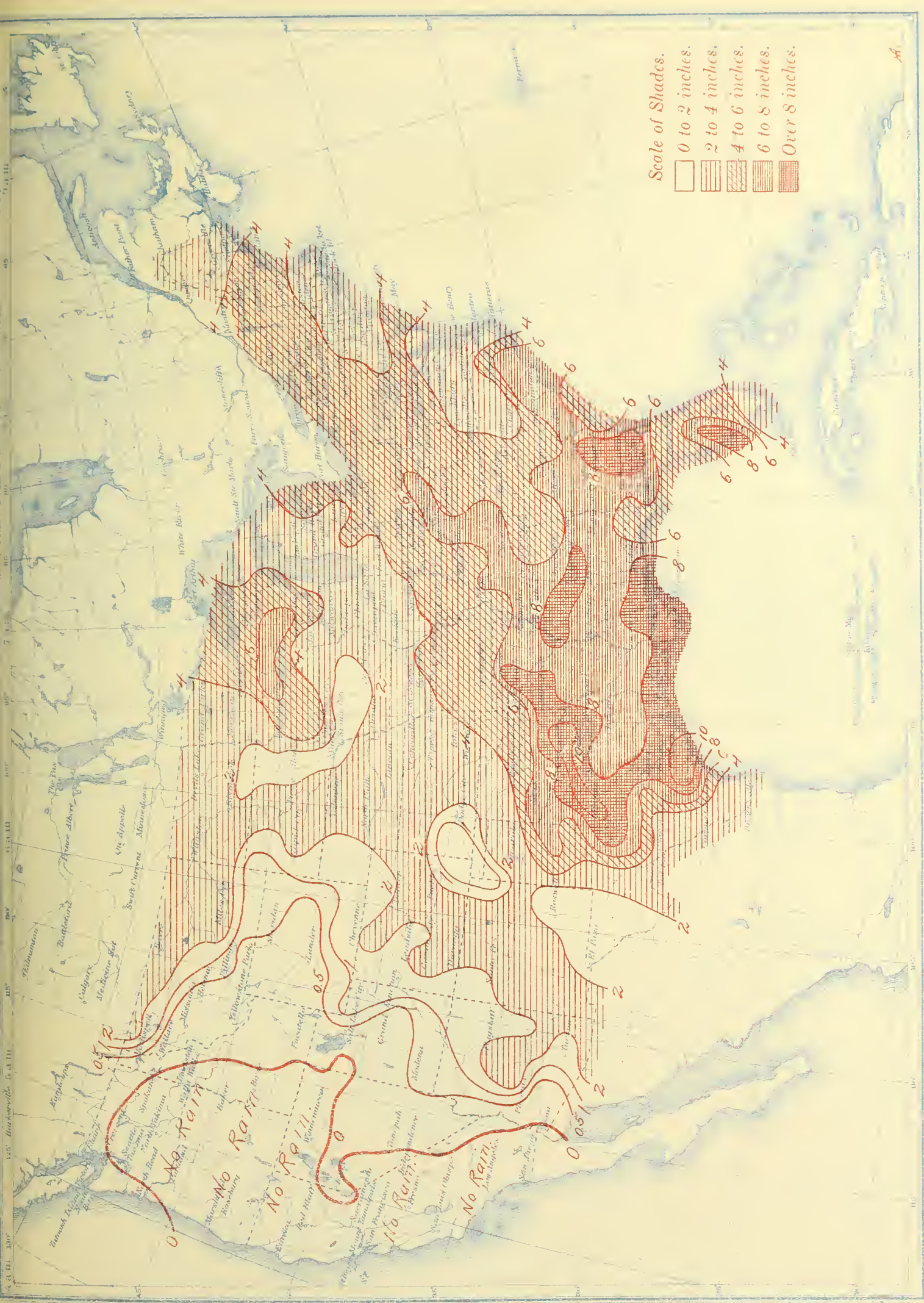
Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24 hour period, midnight to midnight. † Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. ‡ Separate dates of falls not recorded. † Incomplete. * Precipitation included in the next following measurement. **Precipitation for 24 hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.				Moist- ure.	Sun- shine.
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, percentage.	Percentage of possible sunshine.
							Miles per hour.	Direction.	Date.		
Atlantic City.....	30.03	30.19	25	29.83	29	7	20	w.	3	83	76
Asbury Park.....	30.02	30.21	26	29.83	24						
Cape May.....		30.22	26	29.86	29	7	24	s.	17		
Jersey City.....	30.02	30.21	26	29.81	24						60
Long Branch.....	30.02	30.20	25	29.78	29	12	36	e.	29	80	
Newark.....				29.80	2					65	61
New York, N. Y.....	30.01	30.20	26	29.80	24	12	51	nw.	21	77	56
Philadelphia, Pa.....	30.03	30.22	26	29.83	29	8	31	sw.	21	75	50
Trenton.....	30.01	30.20	26	29.81	24	9	32	nw.	2	77	63

Daily temperatures for August, 1914.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.	
<i>The Highlands and Kittatinny Valley.</i>																																	
Belvidere.....	Maximum...	81	83	83	80	78	77	85	87	90	89	85	79	78	81	80	81	71	84	85	85	84	83	83	85	77	78	77	72	73	77	83	81.1
	Minimum...	54	56	61	54	54	60	61	65	67	68	70	68	57	56	64	55	67	60	67	67	62	61	59	68	55	53	57	62	64	62	58	61.0
Charlotteburg.....	Maximum...	80	83	80	75	79	81	85	88	92	86	85	72	79	80	80	80	77	84	92	87	86	82	84	82	79	76	77	71	65	76	84	80.9
	Minimum...	51	54	58	55	62	57	58	64	60	61	69	69	56	47	59	46	55	52	63	64	60	62	49	67	47	49	49	58	60	62	55	57.4
Dover.....	Maximum...	79	83	78	74	75	80	85	87	90	86	82	78	80	79	80	80	75	83	89	79	86	82	83	83	70	70	72	69	65	76	81	79.3
	Minimum...	54	57	61	54	63	61	59	59	64	66	69	65	56	52	60	52	56	57	65	66	64	61	55	64	52	52	54	61	62	60	59	59.4
Layton.....	Maximum...	82	82	82	78	78	90	86	88	90	87	84	77	81	80	82	81	76	83	90	84	85	85	85	83	74	77	78	70	78	84	81.6	
	Minimum...	53	57	60	58	58	60	62	64	64	67	69	67	56	55	56	54	61	59	65	65	65	62	56	65	52	52	54	61	62	62	57	60.0
Newton.....	Maximum...	83	86	82	79	81	80	89	90	96	94	87	82	82	85	83	84	77	89	94	90	90	86	87	86	76	78	80	77	74	80	86	84.3
	Minimum...	55	57	61	55	61	65	61	66	68	70	70	69	58	56	65	55	61	60	66	68	65	64	59	68	55	55	54	64	64	63	50	61.8
Phillipsburg.....	Maximum...	83	86	81	78	80	82	85	89	92	88	82	78	..	81	80	82	82	76	84	93	85	87	85	82	75	80	79	71	70	78	..	81.9
	Minimum...	52	58	61	53	63	61	62	65	63	66	71	69	..	56	53	61	52	61	58	66	65	65	..	68	49	52	55	63	62	63	..	60.5
Sussex.....	Maximum...	83	86	81	78	80	82	85	89	92	88	82	78	..	81	80	82	82	76	84	93	85	87	85	82	75	80	79	71	70	78	..	81.9
	Minimum...	52	58	61	53	63	61	62	65	63	66	71	69	..	56	53	61	52	61	58	66	65	65	..	68	49	52	55	63	62	63	..	60.5
<i>The Red Sandstone Plain.</i>																																	
Bayonne.....	Maximum...	86	86	82	78	77	75	88	86	88	88	87	83	84	83	85	84	84	89	96	82	91	87	87	87	75	74	77	74	73	80	85	83.3
	Minimum...	57	64	63	62	64	64	63	70	71	71	72	71	63	61	69	62	66	64	72	70	67	67	62	70	59	57	59	65	64	65	63	65.1
Bergen Point.....	Maximum...	83	85	83	77	78	76	85	87	89	90	85	83	80	82	80	83	85	88	93	82	89	83	85	88	78	75	75	74	74	79	85	82.5
	Minimum...	57	63	62	62	64	64	61	69	70	69	71	70	62	59	59	60	60	62	71	71	67	64	61	68	59	58	60	65	63	65	61	63.8
Boonton.....	Maximum...	78	..	77	..	76	..	..	..	..	..	..	76	..	78	78	..	74	..	88	78	..	..	..	80	74	78	71	68	70	..	..	..
	Minimum...	50	56	62	58	58	54	58	62	60	60	68	66	58	48	68	52	60	58	59	64	64	49	68	48	46	51	58	57	62	59	..	57.9
Elizabeth.....	Maximum...	87	88	85	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Minimum...	55	59	63	61	64	63	60	68	60	68	72	70	59	55	66	56	61	60	68	68	68	64	58	67	57	55	56	63	65	64	59	62.3
Flemington.....	Maximum...	84	84	83	77	82	83	88	91	95	88	88	81	84	84	86	86	81	90	98	87	90	87	86	87	76	76	80	75	75	80	85	84.4
	Minimum...	54	57	63	60	65	62	61	68	67	67	72	70	59	54	67	56	61	58	66	68	67	66	59	68	57	57	55	61	64	64	60	62.4
Highwood.....	Maximum...	83	84	79	74	76	76	85	87	91	88	83	78	80	80	83	82	80	85	90	81	87	81	84	86	72	72	74	71	82	78	82	81.1
	Minimum...	55	62	63	60	64	63	59	68	67	67	71	70	60	54	66	55	60	58	67	78	66	62	55	69	55	53	56	60	63	63	56	62.1
Jersey City.....	Maximum...	86	89	84	76	76	76	88	87	93	88	86	84	82	82	86	85	84	89	95	84	91	88	87	90	77	76	78	76	74	82	85	84.0
	Minimum...	61	65	65	64	65	66	65	71	72	73	74	72	64	63	70	64	69	66	72	74	71	67	65	70	61	60	60	68	64	65	65	66.8
Lambertville.....	Maximum...	85	85	85	83	84	82	89	89	90	89	84	85	87	86	82	76	78	93	92	91	89	88	88	85	76	80	77	76	79	82	84.8	
	Minimum...	57	61	63	60	67	66	65	71	71	73	74	72	63	60	70	59	60	63	65	71	70	67	68	72	60	61	57	66	65	66	69	65.5
Newark.....	Maximum...	84	87	78	80	78	78	88	90	93	93	86	83	84	84	86	87	86	92	98	84	91	88	86	88	77	76	77	77	73	81	87	84.5
	Minimum...	58	64	63	63	64	64	63	70	70	72	73	71	63	62	69	64	67	65	73	71	70	62	63	64	59	58	60	61	59	61	67	64.9
New Brunswick.....	Maximum...	83	85	80	75	77	77	85	88	94	89	85	82	80	82	83	83	83	91	95	78	89	87	84	87	71	70	72	73	87	78	88	82.6
	Minimum...	56	61	62	61	63	62	58	68	70	68	71	69	60	56	67	57	60	58	67	67	67	64	58	63	56	55	55	59	53	56	60	61.5
Paterson.....	Maximum...	85	87	82	78	79	80	89	90	93	90	85	82	84	85	86	85	82	89	96	88	91	88	90	90	77	77	79	73	69	83	87	84.5
	Minimum...	58	61	63	61	65	62	61	69	68	69	73	71	61	59	67	61	64	62	69	70	68	65	60	70	57	56	59	63	64	63	62	63.9
Plainfield.....	Maximum...	83	85	80	77	77	79	85	88	94	90	86	83	80	83	84	83	83	89	94	83	90	83	86	88	75	72	78	76	74	77	85	82.9
	Minimum...	54	58	63	61	64	63	61	68	69	68	72	70	61	56	67	56	62	60	67	69	69	65	59	68	59	56	57	61	64	66	59	63.0
Somerville.....	Maximum...	85	86	83	80	81	82	89	91	96	96	89	85	83	85	86	85	85	93	98	91	92	87	96	89	83	74	80	76	77	81	86	86.1
	Minimum...	54	55	61	61	64	60	58	66	66	66	71	69	60	53	65	53	58	58	63	66	66	63	57	65	56	54	52	59	63	63	58	60.7
South Orange.....	Maximum...	87	84	79	75	75	77	85	85	91	87	85	80	78	80	81	80	80	87	90	83	87	82	84	85	73	72	76	75	71	77	82	81.1
	Minimum...	58	60	63	63	64	64	62	69	71	68	72	71	62	57	66	60	66	62	68	70	68	66	59	66	58	59	58	62	65	65	62	64.0
New York, N. Y.....	Maximum...	81	82	81	75	75	75	84	87	90	85	83	79	80	79	82	80	82	86	95	81	87	84	83	86	74	73	74	73	74	77	82	80.9
	Minimum...	59	65	64	66	64	64	64	70	75	73	72	69	64	65</																		



Scale of Shades.

- 0 to 2 inches.
- 2 to 4 inches.
- 4 to 6 inches.
- 6 to 8 inches.
- Over 8 inches.

VJ STAGL
UNIVERSITY OF THE
STATE OF NEW JERSEY
200 DEC 1914

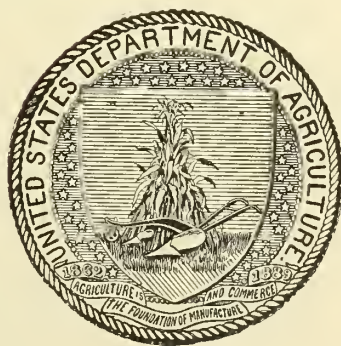
U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU
CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

SEPTEMBER, 1914

BY
G. HAROLD NOYES
SECTION DIRECTOR



TRENTON, N. J.
WEATHER BUREAU OFFICE
OCTOBER 19, 1914.

Departure of the Mean Temperature from the Normal, September, 1914.



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Section Director.

VOL. XXVII. TRENTON, N. J., SEPTEMBER, 1914. No. 9.

GENERAL SUMMARY.

None of the distinctive features of Autumn were apparent in the weather conditions that prevailed in New Jersey in September, 1914, except one or two days of low temperatures in the early morning. The amount of sunshine (and lack of clouds) was unusually large. The temperature averaged somewhat below normal, but the periods of heat and cold were grouped into four distinct and nearly equal divisions; from the 1st to the 7th the thermometer was mostly above normal; from the 8th to the 16th below; from the 17th to the 24th above, and from the 25th to the 30th below. Lower temperatures than the 24°, which occurred on the 29th, have never been recorded in this month in this State. The highest temperature, 99° on the 22d, has been exceeded only in September 1898 and 1895, the latter record being 109°. None of these features, however, are of the significance that attaches to the absence of rain. September averages about 4 inches of rain. This year in September the rain amounted to less than a tenth of the normal. At a few stations it was the driest month on record; at many stations it was the driest September on record, and since State averages have been compiled it was the driest September in the State. In September, 1884, observations were being taken at 13 stations, and some were of doubtful accuracy; in that year the rain averaged 0.38 inch. Dry Septembers in previous years have usually been preceded by wet Augusts, but this year August was considerably drier than normal, and August and September together were the two driest consecutive months on record.

The effect of the drought upon agriculture, including both vegetation and operations, are as might be expected. Fall seed, in rare instances, has safely germinated, but in the majority of instances is of very doubtful promise. Water supplies are diminishing or have failed, and the ground is so dry that plowing has been deferred.

The Delaware River, from Trenton upstream, is lower than for many years. To those who are familiar with locations of obstructions in the stream, rocks are visible that have never before been seen.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 36 stations, was 64.0°, which was 1.6° below normal. All sections of the State averaged about the same, except in the northern highlands, where it was somewhat cooler. The highest temperature, 99° on the 22d, occurred at 3 stations. The lowest temperature, 24°, occurred at 2 stations in the northern highlands on the 29th. The greatest daily range in any one day's temperature was 51° at Indian Mills. The highest monthly mean temperature was 67.2° at Newark and Jersey City, and the lowest was 57.2° at Boonton. All stations were below normal in temperature, except Paterson and Newark, which were slightly above.

PRECIPITATION.

The average rainfall of the State, as deduced from observa-

tions of 11 stations, was 0.37 inch, which was 3.58 inches below normal. The greatest amount was 1.64 inches at Woodbine, and the least was 0.14 inch at Belvidere. There were but three "rains" during the month, on the night of the 3d-4th, the 8th, and the night of the 24th-25th. The greatest amount in 24 consecutive hours was 0.62 inch at Burlington. In a great number of instances the total rainfall of the month fell in less than 24 hours, on the 24th-25th.

WIND.

The prevailing wind direction for each section of the State was northwest, with an approximate average velocity of about 10 miles per hour. The highest velocity recorded during the month was 52 miles per hour from the northwest on the 30th at Long Branch. Winds of any considerable force were not reported at any other station in the State.

SUNSHINE AND CLOUDINESS.

The number of clear days during the month, 21, was unusually large. Partly cloudy days averaged 6, and cloudy, 3. Sunshine averaged approximately 80% of the possible, which was about a fifth greater than usual. The distribution of cloudiness and sunshine was practically uniform over the whole State.

FROST.

The first light frosts of Autumn occurred on September 10th, and occurred only in those localities particularly favorable for its formation. On the 28th and 29 frost was general throughout the State except the extreme south of Cape May County, and varied from light to killing. On the cranberry bogs, at the surface, frosts occurred frequently from the 9th to the 29th, and did some damage.

MISCELLANEOUS PHENOMENA.

Atmospheric pressure, reduced to sea level, was 30.13 inches, which was about 0.07 inch above normal. Relative humidity averaged about 65%, which was nearly 10% drier than usual. Thunder was heard at scattered points on the 2d and 3d, and very generally on the night of the 24th-25th. Lunar halos were observed in the vicinity of New York Harbor on the 3d and 4th. Solar halos were noted at scattered points on the 11th, 17th, 20th, and 29th.

COMPARATIVE DATA FOR SEPTEMBER.

Year.	Temperature.			Average Precipitation.		
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.
1885.....	64.2	93	38	0.83	1.69	0.25
1886.....	66.9	95	36	1.13	1.76	0.86
1887.....	61.6	90	30	3.66	6.25	1.62
1888.....	63.1	84	29	7.09	10.65	3.75
1889.....	64.8	90	34	8.36	13.13	3.17
1890.....	64.4	91	33	4.75	8.61	2.59
1891.....	68.7	95	39	2.46	5.91	0.90
1892.....	64.2	90	33	1.81	3.78	1.02
1893.....	62.7	90	31	3.20	5.38	1.93
1894.....	68.8	97	31	7.46	11.65	3.69
1895.....	69.7	109	29	1.07	2.71	0.22
1896.....	65.1	95	30	4.37	8.74	2.26
1897.....	65.5	99	30	1.65	3.97	0.21
1898.....	68.6	100	31	2.00	3.87	0.65
1899.....	64.4	93	30	5.88	9.61	2.88
1900.....	69.9	98	32	2.86	7.37	1.09
1901.....	66.8	94	29	3.38	6.82	1.63
1902.....	64.6	93	30	5.65	8.95	3.11
1903.....	65.0	92	29	3.34	7.10	1.39
1904.....	64.8	93	23	4.79	10.08	0.89
1905.....	65.4	90	28	5.23	9.18	2.87
1906.....	68.9	94	33	2.19	4.66	0.75
1907.....	67.1	92	31	8.08	12.95	3.55
1908.....	65.7	90	29	2.09	4.13	0.95
1909.....	64.5	89	30	3.30	4.58	2.08
1910.....	67.3	97	32	2.39	3.97	1.01
1911.....	66.4	90	30	2.88	5.33	1.08
1912.....	65.9	87	28	4.47	6.76	2.68
1913.....	64.4	96	27	3.87	6.55	1.56
1914.....	64.0	99	24	0.37	1.64	0.14

Climatological data for September, 1914.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.							Precipitation, in inches.				No. of days.				Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation 0.1 in. or more.	Clear.	Pt. cloudy.	Cloudy.		Prevailing direction of wind.
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	23	61.8	-3.3	90	22	32	29	41	0.14	-3.78	0.07	0	3	23	5	2	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	22	60.4	-1.9	96	22	24	29	50	0.33	-4.35	0.25	0	3	.....	.....	.....	nw.	George S. Briggs.
Culvers Lake.....	Sussex.....	848	13	.....	.....	.....	.....	29	29	.....	0.36	-3.45	0.18	0	4	.....	.....	.....	e.	Brice E. Riker.
Dover.....	Morris.....	600	30	*60.2	-2.4	91	22	29	29	41	0.36	-4.12	0.26	0	3	.....	.....	.....	.....	William C. Harris.
Layton.....	Sussex.....	550	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. A. A. Ranson.
Newton.....	Sussex.....	678	34	61.6	-2.0	91	23	30	29	38	0.35	-3.33	0.17	0	4	16	8	6	n.	Lloyd A. Voorhees.
Phillipsburg.....	Warren.....	363	32	63.8	-1.6	95	23	33	29	44	0.33	-3.45	0.21	0	2	23	4	3	nw.	D. Wilson Smith.
Sussex.....	Sussex.....	442	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	George Dymock.
Means and extremes.....	.....	.....	.....	61.6	-2.2	96	22	24	29	50	0.31	-3.75	0.26	0	3	21	6	3	nw.	.....
<i>The Red Sandstone Plain.</i>																				
Bayonne.....	Hudson.....	50	24	66.0	-0.8	96	22	38	29	37	0.20	-3.69	0.20	0	2	23	5	2	sw.	Erskine R. Eadie.
Bergen Point.....	Hudson.....	37	17	65.6	-1.1	94	22	40	29	35	0.23	-4.30	0.23	0	2	12	16	2	nw.	William H. Mitchell.
Boonton.....	Morris.....	400	24	*57.2	.....	89	21	24	29	47	0.38	-4.11	0.36	0	4	26	1	3	sw.	J. W. Demmers.
Chatham.....	Morris.....	234	12	.....	.....	.....	.....	.....	.....	.....	0.53	-3.60	0.48	0	3	.....	.....	.....	.....	Miss M. A. Butler.
Elizabeth.....	Union.....	45	35	65.7	-1.3	98	†21	33	29	48	0.26	-3.80	0.26	0	1	21	7	2	nw.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	26	64.8	-0.3	99	22	34	29	47	0.29	-3.69	0.29	0	2	25	3	2	sw.	Hiram E. Deats.
Highwood.....	Bergen.....	90	25	61.9	-2.3	92	22	30	29	42	0.38	-3.78	0.28	0	4	19	7	4	w.	Charles J. Bates.
Jersey City.....	Hudson.....	10	15	67.2	0.0	94	2	40	29	32	0.19	-3.52	0.19	0	2	21	6	3	nw.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	95	27	*64.8	-1.2	93	2	40	29	39	0.26	-3.92	0.26	0	1	16	11	3	sw.	Samuel W. Cochran.
Little Falls.....	Passaic.....	180	11	62.2	.....	92	2	31	†28	41	0.21	-4.39	0.19	0	3	26	1	3	w.	Montclair Water Co.
Newark.....	Essex.....	159	72	67.2	+1.3	96	21	40	29	37	0.33	-3.52	0.32	0	3	13	9	8	nw.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	139	61	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	N. J. Experiment Station.
Paterson.....	Passaic.....	80	43	66.8	+0.6	98	†21	36	29	43	0.33	-4.11	0.31	0	3	17	11	2	s.	Heber A. Probert.
Plainfield.....	Union.....	100	28	64.2	-1.0	95	22	35	29	41	0.38	-4.07	0.37	0	3	20	6	4	nw.	John Neagle.
Pompton Plains.....	Morris.....	195	12	.....	.....	.....	.....	.....	.....	.....	0.52	-4.03	0.46	0	3	.....	.....	.....	.....	M. S. Taylor
Somerville.....	Somerset.....	60	31	64.0	-1.3	99	22	30	29	51	0.54	-3.12	0.39	0	3	23	4	3	sw.	A. A. Macdonald.
South Orange.....	Essex.....	200	44	63.6	-0.5	90	22	34	29	35	0.30	-3.79	0.30	0	2	27	2	1	n.	Dr. W. J. Chandler.
New York, N. Y.....	.....	365	44	66.5	-0.3	92	22	42	28	29	0.20	-3.39	0.20	0	2	14	12	4	nw.	U. S. Weather Bureau.
Means and extremes.....	.....	.....	.....	64.4	-0.7	99	22	24	29	51	0.33	-3.84	0.48	0	3	21	6	3	nw.	.....
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	33	65.4	-2.8	94	2	38	†28	37	0.59	-3.22	0.37	0	3	23	3	4	w.	Henry A. Jorden.
Burlington.....	Burlington.....	12	*28	65.7	.....	95	†2	38	29	39	0.62	-3.30	0.62	0	2	25	2	3	n.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	18	65.1	-1.6	96	22	35	28	44	0.21	-3.81	0.21	0	1	22	7	1	sw.	George L. Wilson.
Haddonfield.....	Camden.....	75	27	65.4	-0.6	95	22	35	29	40	0.41	-3.33	0.38	0	4	20	8	2	de.	Chas. F. Richardson.
Hammoncton.....	Atlantic.....	103	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hightstown.....	Mercer.....	135	22	*63.8	-2.8	96	†21	32	29	49	0.27	-3.61	0.27	0	1	26	2	3	nw.	Leon Dunbar.
Imlaystown.....	Monmouth.....	18	26	64.8	-1.9	99	22	35	†28	44	0.30	-4.01	0.30	0	2	21	8	1	w.	H. E. Bullock.
Indian Mills.....	Burlington.....	76	25	64.3	-1.8	98	22	34	29	51	0.36	-3.81	0.30	0	3	22	6	2	sw.	James M. Armstrong.
Lakewood.....	Ocean.....	54	11	62.2	.....	91	2	35	†28	44	0.20	.....	0.20	0	2	17	10	3	nw.	R. W. Holman.
Moorestown.....	Burlington.....	75	52	*65.0	-1.0	95	23	37	29	*40	0.40	-3.36	0.40	0	2	22	7	1	sw.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	7	.....	.....	.....	.....	.....	.....	.....	0.50	.....	0.32	0	4	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	16	.....	.....	.....	.....	.....	.....	.....	0.38	-3.03	0.25	0	3	27	2	1	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	43	65.2	-1.7	95	22	39	29	34	0.41	-3.18	0.41	0	2	17	10	3	n.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	21	64.3	-1.7	94	21	34	29	39	0.46	-2.90	0.24	0	3	24	5	1	nw.	Frank R. Austin.
Vineland.....	Cumberland.....	118	46	64.4	-2.5	96	22	37	29	41	0.28	-3.56	0.28	0	2	22	5	3	nw.	Alfred Chalmers.
Woodbine.....	Cape May.....	43	23	*60.9	-5.4	*92	2	30	29	42	1.64	-2.39	0.55	0	5	.....	.....	.....	.....	Baron de Hirsch Agr. Sch.
Philadelphia, Pa.....	.....	117	44	67.2	-0.2	93	21	44	29	31	0.86	-2.52	0.75	0	3	19	6	5	nw.	U. S. Weather Bureau.
Means and extremes.....	.....	.....	.....	64.3	-2.2	99	22	30	29	51	0.47	-3.35	0.62	0	3	22	6	2	nw.	.....
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	25	64.6	-2.3	92	2	40	28	26	0.15	-3.09	0.15	0	1	.....	.....	.....	ne.	H. E. Denegar.
Atlantic City.....	Atlantic.....	16	16	65.3	-2.3	86	22	42	28	22	0.26	-2.79	0.13	0	4	20	5	5	sw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	17	65.5	-3.5	87	7	42	29	22	0.46	-2.54	0.22	0	4	15	12	3	n.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	25	64.1	.....	96	2	38	28	32	0.21	.....	0.21	0	2	18	10	2	nw.	William D. Martin, Jr.
Means and extremes.....	.....	.....	.....	64.9	-2.7	96	2	38	28	32	0.27	-2.81	0.22	0	3	18	9	3	nw.	.....
Means for the State.....	.....	.....	.....	64.0	-1.6	99	22	24	29	51	0.37	-3.58	0.62	0	3	21	6	3	nw.	.....

† On other dates also.

* Two years temperature record.

"The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining sections or division means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 day, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

[illegible]

* Precipitation included in the next following measurement. **Precipitation for 24 hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

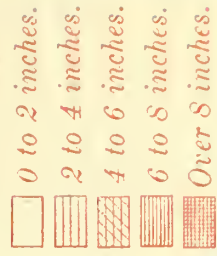
Stations.	Pressure.					Wind.			Moisture.	Sunshine.	
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, percentage.	Percentage of possible sunshine
							Miles per hour.	Direction.	Date.		
Atlantic City.....	30.14	30.44	14	29.81	24	s	21	ne.	13	72	84
Asbury Park.....	30.12	30.48	14	29.75	24	s	26	e.	12		
Cape May.....		30.45	14	29.85	24						83
Jersey City.....	30.12	30.47	14	29.74	24	13	52	nw.	30	66	
Long Branch.....	30.11	30.41	14	29.79	24		15	nw.	26	57	74
Newark.....	30.11	30.50	14	29.76	24	15	54	nw.	30	66	82
New York, N. Y.....	30.11	30.50	14	29.76	24	9	30	nw.	24	63	71
Philadelphia, Pa.....	30.16	30.49	14	29.79	24						
Trenton.....	30.12	30.44	14	29.78	24	10	33	n.	26	66	81

Daily temperatures for September, 1914.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.
<i>The Highlands and Kittatinny Valley.</i>																																
Belvidere.....	Maximum	85	89	79	72	73	78	81	67	65	70	63	68	71	71	75	80	81	85	79	82	88	90	88	80	69	65	70	66	60	69	75.3
	Minimum	62	75	66	56	48	49	61	50	40	39	42	44	40	42	40	41	43	44	51	46	54	55	57	61	58	42	41	34	32	36	48.3
Charlotteburg.....	Maximum	85	89	82	78	76	77	79	70	64	67	65	68	71	71	77	83	87	88	87	85	92	96	93	88	70	60	65	69	63	65	77.0
	Minimum	57	69	65	49	45	39	63	48	41	36	37	34	33	33	31	33	37	40	49	39	52	49	53	58	52	41	33	33	24	43	43.9
Dover.....	Maximum	82	87	78	74	73	77	79	64	64	68	58	64	69	67	71	77	82	84	75	82	88	91	89	79	62	..	65	59	63	66	73.7
	Minimum	60	70	66	53	47	44	58	46	39	38	39	39	37	38	36	37	41	47	50	43	55	55	57	57	53	..	37	35	29	47	46.7
Layton.....	Maximum	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Minimum	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Newton.....	Maximum	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Minimum	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Phillipsburg.....	Maximum	89	93	87	77	78	82	82	67	67	71	65	71	73	74	78	85	88	90	83	87	94	94	95	82	66	64	69	63	62	69	78.2
	Minimum	62	69	67	55	48	48	60	51	41	40	44	45	42	43	41	42	44	48	54	47	57	56	59	58	53	44	40	40	33	48	49.3
Sussex.....	Maximum	86	92	94	74	78	79	80	69	66	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Minimum	57	70	65	52	46	46	60	51	41	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
<i>The Red Bank Stone Plain.</i>																																
Bayonne.....	Maximum	90	93	85	79	77	81	84	67	70	70	64	70	73	72	75	82	86	89	79	83	94	96	94	84	70	65	69	63	64	71	78.0
	Minimum	67	72	70	64	54	56	63	54	48	46	48	49	47	47	47	47	49	52	60	53	59	62	63	64	56	49	46	43	38	50	54.1
Bergen Point.....	Maximum	89	93	84	80	75	80	85	72	67	70	63	68	72	71	73	80	83	86	78	84	92	94	93	85	66	64	71	62	63	71	77.1
	Minimum	65	70	69	61	53	64	65	53	47	47	48	51	49	49	48	46	48	51	58	51	57	61	62	64	56	49	49	41	40	49	54.0
Boonton.....	Maximum	80	..	76	72	70	..	..	61	64	59	64	66	68	72	79	82	85	75	80	89	88	86	80	68	57	62	56	56	62	..	42.9
	Minimum	57	68	68	48	48	42	..	46	42	34	37	40	32	36	32	32	34	38	46	37	46	47	51	60	51	41	31	36	24	38	..
Elizabeth.....	Maximum	92	95	87	80	76	84	88	70	76	74	71	77	77	75	78	85	90	95	82	89	98	98	96	90	77	70	69	68	75	75	81.7
	Minimum	63	71	66	58	49	49	64	53	40	40	44	47	44	44	41	41	43	47	53	45	56	56	58	61	56	43	41	37	33	48	49.7
Flemington.....	Maximum	89	92	84	76	80	80	85	74	75	70	68	73	71	78	85	87	92	84	89	97	99	94	85	86	65	68	63	64	70	70	79.8
	Minimum	63	70	66	58	51	47	63	51	45	44	45	49	39	44	39	41	40	51	55	45	56	57	59	60	49	46	40	39	34	46	49.7
Highwood.....	Maximum	87	91	84	77	74	77	82	73	66	69	61	66	70	69	73	79	82	85	75	82	91	92	91	81	72	64	67	61	62	70	75.8
	Minimum	61	71	65	58	47	47	64	53	38	37	45	46	39	39	38	40	44	52	45	53	52	56	58	56	47	41	32	30	48	48	48.0
Jersey City.....	Maximum	89	94	86	80	77	81	86	70	69	72	64	69	75	72	77	80	85	90	80	84	93	91	89	84	67	67	70	64	63	71	78.0
	Minimum	68	73	72	66	56	59	67	55	48	47	49	55	53	50	49	51	53	58	63	56	61	65	65	67	58	49	49	41	40	50	56.4
Lambertville.....	Maximum	89	93	87	80	79	83	76	74	69	71	69	71	75	74	79	83	78	88	87	85	91	90	91	81	71	67	71	64	63	69	78.3
	Minimum	..	..	..	..	56	57	66	55	46	47	45	48	43	45	43	44	45	51	59	..	68	67	62	..	50	52	45	40	48	..	51.4
Little Falls.....	Maximum	88	92	85	78	72	80	82	71	67	70	66	68	72	70	73	80	83	87	79	83	90	91	90	84	70	63	68	61	62	68	76.4
	Minimum	62	70	66	57	50	49	60	46	43	41	42	43	40	40	40	41	42	46	52	46	54	55	57	56	54	42	39	31	31	48	48.1
Newark.....	Maximum	91	94	84	79	79	84	84	69	69	71	64	68	72	71	80	84	89	90	80	91	96	95	93	87	67	68	64	64	70	70	78.8
	Minimum	68	72	73	66	59	57	66	53	49	46	48	50	49	49	48	47	53	58	63	54	61	66	65	66	57	49	47	42	40	49	55.7
New Brunswick.....	Maximum	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Minimum	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Paterson.....	Maximum	91	95	87	80	80	83	86	79	71	75	64	72	76	75	79	87	91	93	84	90	98	98	95	87	69	68	69	67	59	72	80.7
	Minimum	65	72	70	60	53	54	63	53	46	44	47	49	44	45	44	44	50	53	57	50	61	64	62	63	56	48	44	40	36	51	52.9
Plainfield.....	Maximum	89	93	83	80	77	80	84	69	67	69	63	67	72	71	75	81	84	88	78	84	91	95	94	88	67	64	70	61	63	70	77.3
	Minimum	63	70	68	58	48	49	64	54	43	44	47	49	47	46	45	43	43	48	58	46	55	60	59	63	56	46	39	39	35	46	51.0
Somerville.....	Maximum	89	94	91	82	79	82	85	74	69	72	65	69	74	72	77	83	91	92	83	88	97	99	95	90	68	66	71	64	64	72	79.9
	Minimum	61	68	65	56	48	45	60	52	43	39	43	47	40	42	38	37	40	45	52	45	52	56	56	68	54	44	36	34	30	39	48.2
South Orange.....	Maximum	85	90	81	75	72	79	80	66	65	68	62	65	69	67	70	77	82	84	76	80	88	90	88	84	66	62	66	66	66	67	74.5
	Minimum	65	70	66	59	52	52	64	53	45	45	49	50	49	49	45	45	47	56	55	53	59	60	61	63	57	45	42	40	34	47	52.6
New York, N. Y.....	Maximum	86	89	83	78	75	77	82	66	65	65	62	66	69	69	71	78	86	85	77	81	92	89	84	65	63	66	61	61	67	75.1	
	Minimum	69	72	73	61	55	60	62	53	50	47	52	55	56	55	57	55	61	66</													



Scale of Shades.



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CLIMATOLOGICAL DATA

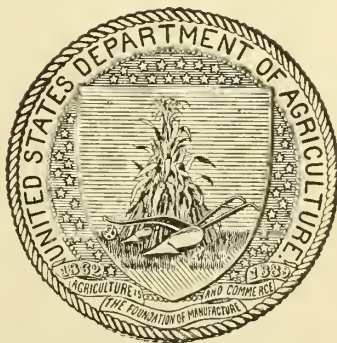
NEW JERSEY SECTION

OCTOBER, 1914

BY

G. HAROLD NOYES

SECTION DIRECTOR



TRENTON, N. J.
WEATHER BUREAU OFFICE
OCTOBER 19, 1914.

Departure of the Mean Temperature from the Normal, October, 1914.



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Section Director.

VOL. XXVII. TRENTON, N. J., OCTOBER, 1914. No. 10.

GENERAL SUMMARY.

The unusually dry weather, that has prevailed since July in New Jersey, has continued unabated. A few stations on the coast had slightly more rain than normal in August, but otherwise, each station in the State has shown a deficiency in rainfall during each of the past three months. Natural streams and lakes are lower than ever before shown in official records, and the memory of the "oldest inhabitant" recollects no lower water in the Delaware River just above Trenton in over forty years. The gauge readings of the river at Trenton have fluctuated just above and below zero, averaging zero. Wells and other sources of water supply are failing, and in this direction the drought is keenly felt. A period of rain in the middle of October saved practically all seed sown previously, but some few showers in the last week of the month were too meager to be beneficial.

The decline in temperature that is normally expected in autumn has been most pleasantly gentle. October, which averages more than 10° cooler than September, has this year decreased but 6° from September. This has resulted in greatly favoring all out-of-door activities, and, except in those interests demanding rain, has been unusually beneficial. The accumulated conditions of a cool summer and mild autumn, together with but actually 17 days on which a measurable amount of rain fell in the past 90, will likely remain as a record for a long time, for continuously pleasant weather.

Except in 1900, this has been the warmest October since average temperatures were first compiled for the State in 1885. Drier Octobers have occurred only in 1892, 1901, and 1909. There were no unusual extremes of temperature reported, except that in the vicinity of New York Bay the temperatures of slightly under freezing, on the morning of the 28th, equalled or broke previous records.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 36 stations, was 58.1°, which was 4.0° above normal. The northern division of the State was about 2° cooler than the State average, and the seacoast stations about 1° warmer. The highest temperature was 88° on the 9th and subsequent dates, and occurred at several stations. The lowest temperature was 19° on the 28th at Woodbine, which was the only station in the State below normal in temperature, indicating that it is a locality of unusually great radiation, or peculiar air drainage. The lowest mean temperature in the State was 53.1° at Boonton, and the highest, 61.5° at Cape May. The greatest daily range of temperature was 48° at Charlotteburg.

PRECIPITATION.

The average rainfall of the State, as deduced from observations of 43 stations, was 1.99 inches, which was 1.69 inches below normal. The greatest monthly amount was 3.08 inches at Highwood, and the least 0.90 inch at Asbury Park. There were

widely scattered light local showers in the southern half of the State on the 5th, and in all portions of the State on the 7th. It rained copiously throughout the State on the 15th, 16th and 17th, and in the northern half on the 18th and 19th. From the 24 to the 30th, (except on the 28th, which was dry,) there were frequent scattered showers in various portions of the State, but in most instances amounts were hardly large enough to measure. The first snow of the season was seen in several places on the 27th, but in no instances was there but a trace. The occurrence being in the night, may have been general, but not generally observed.

WIND.

The prevailing wind direction was from the southwest, but there was considerable wide variation, according to location of station. The average hourly velocity was approximately 10 miles. The highest wind was 53 miles per hour from the northwest on the 27th at Long Branch.

SUNSHINE AND CLOUDINESS.

The number of clear days during the month was 13, partly cloudy and cloudy, 9 each. The average amount of sunshine was approximately 60% of the possible. The amount of cloudiness was about evenly distributed over the State, there being slightly more sun in the southern, than the northern half.

FROST.

In some places peculiarly susceptible to frost, the first killing frost of autumn occurred in September, but the entire Southern Interior and central and northern portions of the coast experienced the first killing frost of the season on the 28th.

MISCELLANEOUS PHENOMENA.

Atmospheric pressure, reduced to sea level, was 30.10 inches which is 0.03 inch above normal. Relative humidity averaged about 72%, which is only slightly under normal. Thunderstorms were of general occurrence on the 18th-19th. Lunar halos were observed in the vicinity of New York Bay on the 3rd and 4th, and solar halos were seen on the 3rd, 4th, 13th, 14th, 17th and 24th. Dense fog was of frequent occurrence, the principal dates being the 2nd, 3rd, 4th, 5th, 15th, 20th and 21st.

COMPARATIVE DATA FOR OCTOBER.

Year.	Temperature.			Average Precipitation.		
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.
1885.....	54.2	82	29	4.20	5.85	2.91
1886.....	55.6	88	21	3.22	8.16	2.02
1887.....	52.3	89	21	2.61	5.00	1.58
1888.....	49.2	73	25	4.73	7.00	2.97
1889.....	50.8	82	23	3.80	5.03	2.42
1890.....	53.9	81	24	6.33	10.18	3.40
1891.....	52.8	92	18	3.44	5.57	1.88
1892.....	53.6	85	21	0.52	1.09	0.04
1893.....	55.2	85	17	4.22	6.59	1.74
1894.....	55.3	87	27	5.67	8.23	3.90
1895.....	49.9	83	18	3.60	5.53	1.62
1896.....	51.5	82	21	2.24	4.58	1.27
1897.....	55.8	95	22	2.43	6.49	0.87
1898.....	56.5	88	24	5.76	8.42	3.32
1899.....	56.6	86	18	2.72	4.65	1.07
1900.....	59.9	92	19	3.70	6.59	1.47
1901.....	54.4	82	21	1.93	4.45	0.87
1902.....	56.0	80	20	6.39	9.35	3.82
1903.....	55.9	86	24	8.92	16.19	4.17
1904.....	51.9	89	15	3.71	7.01	1.50
1905.....	55.5	90	17	2.71	4.83	0.75
1906.....	55.0	80	11	4.46	7.14	2.66
1907.....	50.6	80	18	4.46	7.18	2.70
1908.....	57.3	92	19	2.71	5.14	1.30
1909.....	51.2	84	18	1.18	1.82	0.40
1910.....	51.2	90	18	3.15	5.55	1.55
1911.....	57.2	80	18	5.49	8.23	2.61
1912.....	57.0	88	25	3.30	6.95	1.72
1913.....	57.8	83	25	7.79	13.84	2.70
1914.....	58.1	88	19	1.99	3.08	0.90

Climatological data for October, 1914.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.			Prevailing direction of wind.	Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation .01 in. or more.	Clear.			Pt. cloudy.	Cloudy.
The Highlands and Kittatinny Valley.																				
Belvidere	Warren	289	23	56.8	+4.3	84	11	27	28	38	1.54	-2.30	1.20	0	3					Samuel J. Hixson.
Charlotteburg	Passaic	719	22	55.2	+4.8	82	11	28	28	48	2.06	-2.35		0	4					George S. Briggs.
Culvers Lake	Sussex	848	13					24	27		1.94	-1.71	1.53	T.	6	17	7	7	e.	Brice E. Riker.
Dover	Morris	600	30	54.4	+3.7	82	11	27	27	41	2.45	-1.55		0	8	6	16	9		William C. Harris.
Layton	Sussex	550	15																	Dr. A. A. Ranson.
Newton	Sussex	678	34	55.4	+3.7	79	11	27	28	35	1.70	-2.01	1.65	0	4				n.	Lloyd A. Voorhees.
Phillipsburg	Warren	363	32	57.6	+4.7	84	11	29	28	38	1.69	-1.91	1.34	0	5	14	5	12	sw.	D. Wilson Smith.
Sussex	Sussex	442	24	54.5		85	11	27	28	38	2.02	-1.33	1.59	0	4					George Dymock.
Means and extremes				55.9	+4.2	85	11	24	27	48	1.91	-1.88	1.65	0	5	12	10	9	sw.	
The Red Sandstone Plain.																				
Bayonne	Hudson	50	24	58.8	+3.5	83	11	30	28	31	2.39	-1.26	1.80	0	5	14	7	10	s.	Erskine R. Eadie.
Bergen Point	Hudson	37	17	58.6	+4.3	84	11	28	28	31	2.33	-1.75	1.65	0	5	10	13	8	nw.	William H. Mitchell.
Boutton	Morris	400	24	53.1		78	11	23	28	42	2.06	-1.78	1.46	0	6	18	4	9	sw.	J. W. Demmers.
Chatham	Morris	234	12								2.18	-1.49	1.43	0	5					Miss M. A. Butler.
Elizabeth	Union	45	35	58.9	+4.2	87	10	25	28	42	2.10	-1.72	1.77	0	5	8	12	11	nw.	L. B. Bonnett.
Flemington	Hunterdon	140	26	58.7	+4.6	88	11	28	28	43	2.05	-1.40	1.57	0	6	15	7	9	w.	Hiram E. Deats.
Highwood	Bergen	90	25	56.6	+3.9	83	11	25	28	40	3.08	-1.45	1.85	0	5	10	12	9	sw.	Charles J. Bates.
Jersey City	Hudson	10	15	59.8	+4.2	83	11	31	28	29	2.36	-1.39	2.01	T.	5	12	8	11	sw.	S. K. Pearson, Jr.
Lambertville	Hunterdon	95	27	59.6	+6.0	84	10	31	28	30	1.81	-2.06	1.58	0	4	12	12	7	sw.	Samuel W. Cochran.
Little Falls	Passaic	180	11	56.1		82	11	27	28	36	2.50	-1.34	1.88	0	5				w.	Montclair Water Co.
Newark	Essex	159	72	59.4	+5.0	84	11	31	28	33	2.74	-1.03	2.26	0	4	10	5	16	nw.	Prof. William Wiener.
New Brunswick	Middlesex	139	61	58.8	+4.2	86	10	28	28	37	1.61	-1.98	1.38	0	3	11	15	5	w.	N. J. Experiment Station.
Paterson	Passaic	80	43	59.2	+4.8	85	11	29	28	42	2.78	-1.37	2.26	T.	5	10	17	4	sw.	Heber A. Probert.
Plainfield	Union	100	28	57.7	+4.7	84	10	26	28	38	2.49	-1.16	2.20	T.	4	11	12	8	sw.	John Neagle.
Pompton Plains	Morris	135	12								2.66	-1.10	2.04	0	5					M. S. Taylor
Somerville	Somerset	60	31	57.6	+4.2	87	10	26	28	35	2.05	-1.36	1.84	0	5					A. A. Macdonald.
South Orange	Essex	200	44	57.1	+4.2	80	11	28	28	30	2.33	-1.48	2.10	0	4	12	9	10	sw.	Dr. W. J. Chandler.
New York, N. Y.		365	44	59.0	+3.4	80	11	31	28	23	1.92	-1.79	1.71	0	4	8	11	12	sw.	U. S. Weather Bureau.
Means and extremes				58.0	+4.4	88	11	23	28	43	2.33	-1.48	2.26	0	5	12	10	9	sw.	
The Southern Interior.																				
Bridgeton	Cumberland	30	33	60.0	+3.3	87	10	28	28	34	1.18	-2.35	0.75	0	5	17	6	8	w.	Henry A. Jorden.
Burlington	Burlington	12	*28	58.8		87	10	29	28	30	2.34	-1.11	1.98	0	3	18	3	10	nw.	D. S. B. McCoy.
Clayton	Gloucester	126	18	59.8	+4.7	88	11	30	29	39	1.35	-2.16	1.03	0	4	13	11	7		George L. Wilson.
Haddonfield	Camden	75	27	59.4	+5.7	87	10	28	28	36	2.06	-1.08	1.61	T.	3	10	15	6	sw.	Chas. F. Richardson.
Hammononton	Atlantic	103	16																	H. J. Rolfe.
Hightstown	Mercer	135	22	*60.4		88	10	26	28	38	1.18	-3.05	1.13	0	4				nw.	Leon Dunbar.
Inlaystown	Monmouth	185	26	58.0	+3.1	88	10	23	28	40	1.50	-2.57	1.10	0	2	18	4	9	sw.	H. E. Bullock.
Indian Mills	Burlington	76	25	58.8	+4.4	88	10	21	28	46	1.54	-2.04	0.86	0	4	15	8	8	e.	James M. Armstrong.
Lakewood	Ocean	54	11	56.7		84	10	22	28	39	1.15		0.83	0	3	8	7	16	sw.	R. W. Holman.
Moorestown	Burlington	75	52	60.3	+6.1	88	10	29	28	32	1.82	-1.82	1.41	0	3	13	11	7	se.	Geo. L. Gillingham.
Northfield	Atlantic	25	7								2.49		1.70	0	8					William L. Flick.
Pleasantville	Atlantic	26	16								2.37	-1.25	1.69	0	6	15	9	7		Lincoln Van Gilder.
Trenton	Mercer	190	43	59.0	+3.4	84	10	31	28	31	1.74	-1.67	1.61	T.	3	10	9	12	s.	U. S. Weather Bureau.
Tuckerton	Ocean	23	21	58.4	+3.6	87	11	22	28	40	1.95	-1.72	1.63	0	4	14	10	7		Frank R. Austin.
Vineland	Cumberland	118	46	*59.2	+3.8	*84	11	26	28	38	1.66	-1.80	1.38	0	5	18	6	7	nw.	E. V. C. Hendricks.
Woodbine	Cape May	43	23	*55.1	-0.5	82	10	19	28	44	1.79	-1.80	0.90	0	5				s.	Baron de Hirsch Agr. Sch.
Philadelphia, Pa.		117	44	61.2	+4.9	85	10	33	28	22	1.49	-1.61	1.38	0	4	11	8	12	sw.	U. S. Weather Bureau.
Means and extremes				58.6	+3.8	88	10	19	28	46	1.74	-1.88	1.98	0	4	14	8	9	sw.	
The Sea Coast.																				
Asbury Park	Monmouth	22	25	58.2	+2.6	79	11	29	28	25	0.90	-2.88		T.	4	12	8	11		H. E. Denegar.
Atlantic City	Atlantic	16	16	59.8	+2.4	75	11	32	28	21	2.25	-1.05	1.72	0	6	12	5	14	sw.	U. S. Weather Bureau.
Cape May City	Cape May	17	17	61.5	+1.9	82	11	37	27	21	2.15	-1.15	1.28	0	6	10	14	7	e.	U. S. Weather Bureau.
Long Branch	Monmouth	25	25	57.8		87	11	27	28	27	1.34		1.13	0	5	10	9	12	w.	William D. Martin, Jr.
Means and extremes				59.3	+2.3	87	11	27	28	27	1.66	-1.69	1.72	0	4	11	9	11	sw.	
Means for the State				58.1	+4.0	88	10	19	28	48	1.99	-1.69	2.26	0	5	13	9	9	sw.	

† On other dates also.

* Two years temperature record.

"The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining sections or division means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 day, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

Daily precipitation for October, 1914.

Stations.	Day of month.																															Total.		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
<i>The Highlands and Kittatinny Valley.</i>																																		
Belvidere.....							.25									1.20	.09																1.54	
Charlotteburg.....							T.									* 1.72	.34									T.	T.				T.		2.06	
Culvers Lake.....														T.	.02	1.53	.23	.14	.01							T.	T.	T.			.01	T.	1.94	
Dover.....							.01									* 2.00	*	.38								.05						.01		2.45
Dayton.....																																		
Newton.....							T.								.01	1.64		.04								.01					T.	T.		1.70
Phillipsburg.....							.20								.08	1.34	.06										.01					T.	.01	1.69
Sussex.....							T.									1.59	.10	.22	.11														2.02	
<i>The Red Sandstone Plain.</i>																																		
Bayonne.....															.08	1.80	.15	.24	.12														2.39	
Bergen Point.....							T.								.07	1.65	.18	.43								T.							2.33	
Boonton II.....																.50	1.46	.01	.07							.02						T.	2.06	
Chatham II.....								.05								.55	1.43	.07	.08														2.18	
Elizabeth.....							T.								.10	1.77	.17	*	.06							T.					T.		2.10	
Flemington.....							.05	T.							.04	1.57	.10	.13	.16								T.					T.		2.05
Highwood.....															T.	1.85	.35	.85										.01				.02	3.08	
Jersey City.....							T.								.05	1.86	.17	.08	.20								T.	T.					2.36	
Lambertville.....								.06							.03	1.58	.14	T.														T.	1.81	
Little Falls**.....															.05	1.88	.15	.19	.23														2.50	
Newark**.....							T.			T.					.06	2.26	.17	.25														T.	T.	2.74
New Brunswick**.....															.01	1.38	.22		T.	.24												T.	1.61	
Paterson.....						T.		T.							.05	2.26	.23	T.	.24													T.	T.	2.78
Plainfield**.....							.07								.06	2.20	.16		T.							T.	T.	T.				T.	2.49	
Tompton Plains II.....								.03								.41	2.04	.06	.12														2.66	
Tomerville.....							.03								.02	1.84	.12	.04															2.05	
South Orange.....							T.								.01	2.10	.20	.02														T.	2.33	
New York, N. Y.***.....							T.								.06	1.70	.12	T.	.04								T.					T.	1.92	
<i>The Southern Interior.</i>																																		
Bridgeton.....					.08										.08	.75	.22									.05	T.						1.18	
Burlington.....							T.	T.							.12	1.98	.24																2.34	
Clayton.....					T.			T.							.08	1.03	.23								.01								1.35	
Ladsonfield.....							T.	T.							.22	1.61	.23																2.06	
Lammonton.....																																		
Lightstown.....							.02									T.	1.13	.03														T.	1.18	
Maystown.....															1.10	.40																T.	1.50	
Indian Mills.....															.14	.86	.52																1.54	
Lakewood.....							T.								T.	.83	.30	.02									T.	T.			.02		T.	1.15
Moorestown.....															.10	1.41	.31																1.82	
Northfield.....					.11			.01							.06	1.70	.39									.02	.04	.16					2.49	
Pleasantville.....					.15										.03	1.69	.33									T.	.05	.12					2.37	
Trenton***.....							T.								.03	1.61	.10	T.								T.	T.	T.				T.	1.74	
Tuckerton.....					.30										.02	.60	1.03																1.95	
Wineland.....					.02											1.38	.21									.04					.01		1.66	
Woodbine.....						T.	.10								.18	.90	.43									.18							1.79	
Philadelphia, Pa.***.....							T.	T.							.11	1.33	.04									T.	T.	T.			.01		1.49	
<i>The Sea Coast.</i>																																		
Asbury Park**.....						T.		T.							T.	*	.88	.01								T.	T.	.01	T.			T.	0.90	
Atlantic City***.....					.11										.06	1.52	.23										T.	.17	.16				2.25	
Cape May City***.....					.31										.03	1.36	.13	T.										.14	.18				2.15	
Long Branch**.....							T.								.01	1.13	.18	.01	T.							.01	T.				T.	T.	1.34	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24 hour period, midnight to midnight.

|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. † Separate dates of falls not recorded. ‡ Incomplete.

* Precipitation included in the next following measurement. ** Precipitation for 24 hour period from midnight to midnight. T, Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Monthly mean.	Pressure.				Wind.				Moisture.	Sun. shine.
		Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, percentage.	Percentage of possible sunshine.
							Miles per hour.	Direction.	Date.		
Atlantic City.....	30.12	30.43	14	29.68	26	7	23	nw.	27	77	64
Asbury Park.....	30.10	30.50	14	29.68	26						
Cape May.....	30.40	30.40	23	29.68	26	8	34	nw.	27		
Jersey City.....	30.10	30.53	14	29.67	26						
Long Branch.....	30.10	30.49	14	29.64	26	15	33	nw.	27	72	61
Newark.....	30.10	30.48	14	29.76	26						
New York, N. Y.....	30.09	30.52	14	29.66	26	14	32	nw.	27	64	53
Philadelphia, Pa.....	30.13	30.47	14	29.67	26	8	33	nw.	27	70	60
Trenton.....	30.09	30.48	14	29.64	26	10	36	nw.	30	75	56

Daily temperatures for October, 1914.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean
<i>The Highlands and Kittatinny Valley.</i>																																
Belvidere.....	Maximum... 70	71	76	75	78	79	60	70	74	77	84	77	65	59	61	65	72	69	69	72	77	79	63	63	57	63	56	56	55	55	64	68
	Minimum... 42	37	38	47	52	48	55	55	52	60	61	55	49	44	45	57	61	46	49	42	42	45	40	39	45	39	33	27	34	40	44	45
Charlotteburg.....	Maximum... 69	77	78	75	77	77	64	74	76	80	82	73	70	56	58	62	67	68	64	71	77	73	69	61	59	60	54	50	52	50	55	67
	Minimum... 42	29	32	45	47	55	51	53	45	56	59	50	42	45	42	55	62	39	44	45	37	53	38	37	42	32	30	28	35	40	35	43
Dover.....	Maximum... 66	73	77	74	75	73	58	70	75	79	82	76	61	54	58	63	66	68	64	71	77	75	55	59	50	59	40	49	51	53	59	64
	Minimum... 41	34	36	48	50	53	52	53	49	57	59	47	45	45	44	58	52	42	48	42	41	44	40	38	43	39	27	27	34	41	35	44
Layton.....	Maximum... ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Minimum... ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Newton.....	Maximum... 66	70	75	75	75	74	60	71	74	77	79	76	65	58	60	62	67	67	63	67	73	72	62	60	59	58	54	49	54	50	55	65
	Minimum... 42	37	40	48	52	54	52	53	51	56	62	46	47	42	45	55	55	45	55	41	54	51	37	40	41	37	30	27	36	40	35	45
Phillipsburg.....	Maximum... 73	75	79	77	79	81	59	69	74	82	84	78	70	59	60	68	74	65	69	73	77	78	62	62	52	61	56	52	55	53	61	68
	Minimum... 45	38	41	48	52	52	55	55	54	60	62	50	50	47	49	58	64	47	50	44	44	49	39	41	45	39	32	29	35	42	37	46
Sussex.....	Maximum... ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Minimum... ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
<i>The Red Sandstone Plain.</i>																																
Bayonne.....	Maximum... 69	73	79	74	75	77	60	74	78	75	83	76	67	64	63	65	69	70	65	73	78	77	60	63	59	61	54	53	56	55	57	67
	Minimum... 47	44	48	54	57	55	54	57	61	59	65	55	51	50	52	61	61	50	50	48	51	53	43	44	47	43	36	34	36	44	39	49
Bergen Point.....	Maximum... 65	72	70	76	76	74	61	74	78	79	84	77	74	61	63	67	67	67	67	67	73	76	63	60	60	60	64	54	56	54	57	66
	Minimum... 45	43	49	53	56	53	50	56	60	59	63	53	52	50	53	61	57	57	49	52	48	50	51	44	48	47	42	33	28	35	41	43
Boonton.....	Maximum... 62	70	72	68	70	72	66	68	72	78	72	66	53	55	56	58	52	57	38	48	36	38	46	40	36	46	40	36	23	32	44	38
	Minimum... 36	28	32	45	42	48	48	50	42	51	50	52	48	41	36	52	57	38	48	36	38	46	41	63	63	58	64	56	55	57	59	62
Elizabeth.....	Maximum... 74	78	84	77	81	78	63	77	78	87	86	82	75	63	62	67	72	75	71	77	81	81	63	63	48	47	38	35	25	30	41	36
	Minimum... 42	38	42	50	52	57	55	56	56	56	59	46	49	48	51	60	64	45	51	61	68	76	80	78	69	64	60	54	54	56	68	60
Flemington.....	Maximum... 73	77	81	74	82	80	61	72	78	85	88	80	69	59	61	67	70	68	68	73	76	74	51	43	40	47	37	33	28	31	44	36
	Minimum... 46	37	38	50	53	53	55	56	61	60	59	46	51	49	51	58	62	45	50	42	44	46	73	64	63	59	61	56	53	55	56	57
Highwood.....	Maximum... 63	71	78	76	76	72	63	74	75	79	83	76	68	58	62	66	69	70	67	70	76	73	41	46	42	39	46	40	35	25	35	40
	Minimum... 39	35	38	47	52	46	54	56	51	55	65	47	50	46	51	60	64	43	52	43	41	46	63	63	58	61	55	53	56	56	58	67
Jersey City.....	Maximum... 66	72	79	76	74	75	60	74	77	78	83	76	65	61	63	67	73	69	67	71	70	67	51	51	60	46	49	46	45	31	39	45
	Minimum... 50	47	50	56	60	56	58	62	62	65	67	56	50	52	63	65	55	54	51	51	60	77	74	64	63	61	59	54	57	56	60	69
Lambertville.....	Maximum... 71	73	70	74	77	74	68	69	77	84	80	79	75	65	64	69	71	70	67	72	76	72	51	43	49	44	35	31	35	44	38	49
	Minimum... 49	48	43	53	55	56	57	57	61	61	64	51	51	51	54	59	65	50	50	47	51	53	44	43	49	44	35	31	35	44	38	49
Little Falls.....	Maximum... 68	70	76	75	78	74	66	74	76	81	82	75	65	60	65	65	70	69	66	69	74	76	61	63	60	61	58	55	56	56	62	68
	Minimum... 42	36	40	48	51	49	54	54	51	57	57	51	49	50	49	51	50	45	46	44	43	46	42	40	41	40	28	27	34	41	35	44
Newark.....	Maximum... 68	69	80	77	79	74	71	75	78	80	84	79	61	60	61	66	71	70	68	74	76	76	61	63	60	61	58	55	56	56	62	68
	Minimum... 49	46	47	47	58	60	56	56	61	61	64	57	53	48	50	58	54	49	53	51	59	44	47	47	44	44	35	31	37	44	39	50
New Brunswick.....	Maximum... 69	73	79	75	78	76	61	72	79	86	82	79	72	59	61	69	68	71	67	73	76	76	66	63	60	60	56	56	58	55	59	68
	Minimum... 44	41	42	52	59	56	54	55	60	58	65	52	52	49	52	60	64	47	50	45	48	53	42	40	47	42	34	28	38	43	37	48
Paterson.....	Maximum... 71	77	84	80	80	75	61	77	80	83	85	80	71	60	61	66	71	70	67	75	81	78	62	65	60	65	57	59	56	56	59	70
	Minimum... 46	42	42	54	56	54	55	56	54	59	60	52	52	47	47	59	61	48	53	47	49	52	44	44	47	41	36	29	36	44	38	48
Plainfield.....	Maximum... 70	72	79	75	77	77	63	74	79	84	83	76	63	59	62	68	69	72	69	73	77	77	60	64	57	61	52	54	56	56	58	68
	Minimum... 48	39	41	49	53	52	54	56	57	58	60	49	52	48	51	60	56	47	51	44	45	50	43	39	47	40	33	26	32	42	38	47
Somerville.....	Maximum... 72	..	..	76	82	79	67	73	80	87	85	78	66	60	63	69	70	74	70	76	78	79	68	65	59	61	54	55	59	56	60	69
	Minimum... 41	..	..	46	50	48	53	55	60	57	60	43	46	48	51	58	59	45	49	41	43	46	41	37	46	35	33	26	28	42	35	45
South Orange.....	Maximum... 67	69	75	73	75	72	62	71	76	78	80	74	62	57	61	66	68	66	65	70	73	73	57	63	58	60	51	51	57	55	57	65
	Minimum... 48	41	46	55	56	57	56	56	57	58	50	52	53	48	49	61	56	48	52	46	51	54	43	42	47	41	31	28	34	38	48	48
New York, N. Y.....	Maximum... 64	72	75	75	75	72	59	71	74	76	80	75	62	51	54	63	66	67	66													



Scale of Shades.

- 0 to 2 inches.
- 2 to 4 inches.
- 4 to 6 inches.
- 6 to 8 inches.
- Over 8 inches.

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CLIMATOLOGICAL DATA

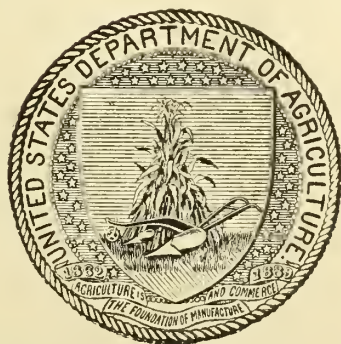
NEW JERSEY SECTION

NOVEMBER, 1914

BY

G. HAROLD NOYES

SECTION DIRECTOR



TRENTON, N. J.
WEATHER BUREAU OFFICE
DECEMBER 16, 1914.

Departure of the Mean Temperature from the Normal, November, 1914.



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Section Director.

VOL. XXVII. TRENTON, N. J., NOVEMBER, 1914. No. 11.

GENERAL SUMMARY.

The salient features of the weather conditions in New Jersey November, 1914, were the nearly normal temperature conditions, the slight deficiency of precipitation, and the unusual lack of cloudiness. More than two-thirds of the possible amount of sunshine occurred, which with southwesterly winds, made the weather more than ordinarily pleasant. Warm periods of the month were the first five days, from the 13th to the 16th, and from the 25th through the close of the month. Temperatures were markedly below normal between these warm periods. In a shorter period than 24 hours from the 16th to the 17th, temperatures fell sharply approximately 30° and to readings several degrees below freezing. This was the nearest approach to a cold wave that occurred during the month. It then remained cold through the 24th, which was the coldest day of the month. On the 24th, in the northern highlands temperatures were within a few degrees of zero.

The deficiency in precipitation was sufficient to make the shortage in water supply keenly felt; wells, streams and lakes were very low and in some cases failed entirely. The stage of the Delaware River at Trenton averaged one-tenth foot for the month, and for several days was 0.2 foot below the zero of the gage.

The pleasant weather was favorable for fall sown grain, which mostly recovered from the effects of the drought of previous months. Some fall plowing was done late in the month. In the northern highlands there was an average of about five inches of snow on the 19th-29th, which was the first notable snow of the year.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 36 stations, was 43.3°, which was 0.4° above normal. The northern highlands averaged about 5° cooler than the coast stations. The highest temperature was 80° on the 4th, occurring at several stations in the Southern Interior. The lowest temperature was 6° on the 24th at Sussex. Nearly all stations averaged slightly above normal in temperature, except a few lying approximately along the divide between the eastern and western drainage areas. The greatest variations from normal were Moorestown 3° above, and Dover, 7° below, normal. The highest monthly mean temperature was 47.3° at Cape May, and the lowest 38.6° at Dover. The greatest daily range of temperature was 48° at Clayton.

PRECIPITATION.

The average precipitation of the State, as deduced from observations of 43 stations, was 2.60 inches, which was 0.80 inch below normal. The greatest monthly amount was 4.81 inches at Charlotteburg, and the least was 1.21 at Atlantic City. Precipitation occurred in four distinct storms; on the 2d, the night of the 8th-9th, the 15th-16th, and the 19th-20th. The

greatest snowfall of the month was 8.0 inches at Sussex. The average number of days on which 0.01 inch or more precipitation occurred was 6, which was 2 below normal. The greatest precipitation in 24 consecutive hours was 3.15 inches at Chat-ham. During the past 13 months there have been but two in which the precipitation was even slightly above normal, and since the first of the present year there has been a deficiency of precipitation amounting to approximately 10.5 inches.

WIND.

The prevailing wind direction was from the southwest. In the northern half of the State northwesterly winds predominated. The average hourly velocity was approximately 15 miles per hour which was somewhat above normal. The highest velocity was 72 miles per hour from the east, at Long Branch, on the 15th. Gales also occurred on the 13th.

SUNSHINE AND CLOUDINESS.

The average number of clear days during the month was 16; partly cloudy, 8; and cloudy, 6. The average amount of sunshine was approximately 70% of the possible, which was considerably above normal. The distribution of cloudiness over the State was relatively uniform.

FROST.

Killing frost had occurred over practically the whole State, except the coast, prior to November. On November 10th, Atlantic City, Cape May and Sandy Hook reported the first killing frost of autumn.

MISCELLANEOUS PHENOMENA.

Atmospheric pressure, reduced to sea level, was 30.10 inches, which was normal. Relative humidity averaged approximately 64%, which was considerably below normal. Solar halos were reported along the coast on the 25th and 28th. Lunar halos were generally observed on the 1st, 27th, and 28th. There were several occurrences of sleet on the 15th. Dense fog was reported in some instances on the 16th and 29th, and very generally on the 30th.

COMPARATIVE DATA FOR NOVEMBER.

Year.	Temperature.			Average Precipitation.		
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.
1885.....	44.8	76	18	4.53	7.90	2.72
1886.....	44.5	73	17	4.49	6.24	3.45
1887.....	41.5	72	13	1.94	2.60	0.95
1888.....	45.8	77	8	3.97	5.41	2.66
1889.....	45.7	69	13	8.48	11.45	4.70
1890.....	43.8	74	11	0.82	1.10	0.38
1891.....	42.2	70	6	2.39	3.47	1.54
1892.....	41.9	71	12	7.29	9.49	4.74
1893.....	41.8	70	11	3.48	4.53	2.19
1894.....	40.3	76	11	3.34	5.12	1.77
1895.....	45.7	80	12	3.17	5.10	1.56
1896.....	48.2	78	12	3.05	5.68	1.37
1897.....	43.8	74	10	4.59	5.95	2.42
1898.....	42.4	70	11	6.76	9.07	3.83
1899.....	44.0	71	17	2.29	4.32	0.72
1900.....	47.5	79	15	3.43	5.54	1.82
1901.....	38.5	69	10	2.38	4.23	1.18
1902.....	49.3	80	20	2.20	4.17	0.87
1903.....	39.9	79	3	1.26	2.03	0.75
1904.....	40.2	69	6	2.18	3.40	1.30
1905.....	42.1	70	6	1.84	2.86	0.54
1906.....	43.6	70	8	1.61	2.52	1.06
1907.....	43.5	68	13	5.65	6.95	4.19
1908.....	43.1	72	2	0.96	1.29	0.35
1909.....	46.4	80	17	2.36	4.33	1.32
1910.....	40.4	71	12	3.79	5.73	1.63
1911.....	41.3	73	13	5.17	6.50	3.17
1912.....	45.3	76	11	3.43	8.12	2.02
1913.....	46.2	77	19	2.71	4.89	1.00
1914.....	43.3	80	6	2.60	4.81	1.21

Climatological data for November, 1914.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation of in. or more.	Clear.	Pt. cloudy.			Cloudy.
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	23	41.2	0.0	74	1	15	24	40	2.45	-1.04	1.09	1.2	5	21	5	4		Samuel J. Hixson. George S. Briggs. Brice E. Riker. William C. Harris.
Charlotteburg.....	Passaic.....	719	22	39.5	-1.0	69	1	12	29	38	4.81	+1.08	.....	4.0	6	13	14	3	nw.	
Culvers Lake.....	Sussex.....	848	13	.....	.....	.....	.....	.....	24	.....	2.44	-0.38	1.19	6.4	5	17	10	3	w.	
Dover.....	Morris.....	600	30	38.6	-1.7	68	1	12	24	33	4.12	+0.49	.....	6.0	8	.....	.....	.....	.....	
Layton.....	Sussex.....	550	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Newton.....	Sussex.....	678	34	40.6	+0.8	66	4	10	24	30		-1.56	1.38	7.0		14	6	10	n.	Lloyd A. Voorhees. D. Wilson Smith. George Dymock.
Phillipsburg.....	Warren.....	363	32	42.2	+0.6	69	†1	19	24	34	1.72	-0.96	0.78	0.2	6	18	8	4	sw.	
Sussex.....	Sussex.....	442	24	39.6	-0.9	70	1	6	24	34	2.10	-0.96	0.78	8.0	6	14	4	12	nw.	
Means and extremes.....				40.3	-0.4	74	1	6	24	40	2.94	-0.40	1.38	4.9	6	16	8	6	nw.	
<i>The Red Sandstone Plain.</i>																				
Bayonne.....	Hudson.....	50	24	44.2	+1.2	76	4	21	24	30	3.04	-0.49	1.04	T.	6	17	5	8	s.	Erskine R. Eadie. William H. Mitchell. J. W. Demmers. Miss M. A. Butler. L. B. Bonnett.
Bergen Point.....	Hudson.....	37	17	43.5	+0.5	76	4	19	24	31	3.47	-0.11	1.30	T.	6	.....	.....	.....	.....	
Boonton*.....	Morris.....	400	*24	40.4	.....	71	4	14	24	36	3.64	-0.03	2.68	T.	7	20	3	7	sw.	
Chatham.....	Morris.....	234	12	.....	.....	.....	.....	.....	.....	.....	4.33	+0.84	3.15	0	5	.....	.....	.....	.....	
Elizabeth.....	Union.....	45	35	43.4	-0.2	79	4	17	24	38	3.02	-0.32	1.25	T.	7	9	14	7	nw.	
Flemington.....	Hunterdon.....	140	26	43.0	+0.2	77	4	19	24	40	2.27	-1.08	1.56	0	7	20	5	5	w.	Hiram E. Deats. Charles J. Bates. S. K. Pearson, Jr. Samuel W. Cochran. Montclair Water Co.
Highwood.....	Bergen.....	90	25	41.8	-0.5	76	4	17	24	34	3.94	+0.31	2.10	T.	6	12	9	9	nw.	
Jersey City.....	Hudson.....	10	15	45.1	+1.5	76	4	22	24	26	3.09	-0.31	1.76	T.	5	14	10	6	nw.	
Lambertville.....	Hunterdon.....	80	27	45.0	+2.0	77	4	22	24	36	1.50	-2.11	0.72	0	5	11	16	3	nw.	
Little Falls*.....	Passaic.....	180	*11	41.5	.....	74	4	19	24	34	4.22	+0.70	2.75	0	6	13	7	10	w.	
Newark.....	Essex.....	159	72	44.2	+1.3	76	4	20	24	31	3.44	-0.06	2.40	T.	7	16	5	9	nw.	Prof. William Wiener. N. J. Experiment Station. Heber A. Probert. John Neagle. M. S. Taylor
New Brunswick.....	Middlesex.....	139	61	43.8	+0.2	79	4	18	24	37	2.87	-0.72	1.17	T.	6	10	16	4	sw.	
Paterson.....	Passaic.....	80	43	44.5	+1.2	75	4	20	24	38	3.61	+0.35	1.38	T.	6	.....	.....	.....	.....	
Plainfield.....	Union.....	100	28	42.7	+0.7	78	4	16	24	39	3.49	-0.10	2.10	T.	6	10	14	6	sw.	
Pompton Plains.....	Morris.....	195	12	.....	.....	.....	.....	.....	.....	.....	4.17	+0.68	2.94	0	5	.....	.....	.....	.....	
Somerville.....	Somerset.....	60	32	42.2	0.0	79	4	15	24	45	2.61	-0.78	1.13	0	5	19	5	6	nw.	A. A. Macdonald. Dr. W. J. Chandler. U. S. Weather Bureau.
South Orange.....	Essex.....	200	44	42.6	+1.0	75	4	18	24	31	3.45	+0.08	2.06	T.	6	19	6	5	sw.	
New York, N. Y.....		365	44	44.0	0.0	73	4	22	23	25	2.08	-1.36	0.96	0	6	11	9	10	sw.	
Means and extremes.....				43.2	+0.7	79	4	14	24	45	3.30	-0.19	3.15	T.	6	15	9	6	nw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	33	45.4	+0.5	80	4	17	24	38	2.12	-1.14	1.38	0	5	18	10	2	w.	Henry A. Jorden. D. S. B. McCoy. George L. Wilson. Prof. Chas. F. Richardson. H. J. Rolfe.
Burlington*.....	Burlington.....	12	*28	43.9	.....	75	4	18	24	32	1.73	-2.01	1.02	T.	4	22	3	5	nw.	
Clayton.....	Gloucester.....	126	22	44.8	+1.4	79	4	20	18	48	2.13	-1.40	1.28	0	5	22	4	4	nw.	
Haddonfield.....	Camden.....	75	27	44.8	+2.2	78	4	15	24	35	1.99	-1.33	1.40	0	6	15	11	4	sw.	
Hammonton.....	Atlantic.....	103	17	.....	.....	.....	.....	.....	.....	.....	2.17	-1.55	1.42	0	6	.....	.....	.....	.....	
Hightstown.....	Mercer.....	140	22	42.6	-1.0	76	4	16	24	34	1.78	-1.88	1.06	T.	6					Chas. W. Dunbar. H. E. Bullock. James M. Armstrong. R. W. Holman. Geo. L. Gillingham.
Imlaystown.....	Monmouth.....	185	26	43.3	-1.0	78	4	12	24	37	2.10	-1.56	0.70	0	5	22	3	5	w.	
Indian Mills.....	Burlington.....	76	25	43.8	+0.4	80	4	9	24	42	1.95	-1.65	0.88	T.	6	15	11	4	sw.	
Lakewood.....	Ocean.....	54	11	42.5	.....	76	4	14	24	36	2.61	.....	0.83	0	6	.....	.....	.....	.....	
Moorestown.....	Burlington.....	75	52	46.0	+3.0	78	4	14	24	33	2.13	-1.29	1.20	0	6	7	18	5	w.	
Northfield.....	Atlantic.....	25	7								1.69		0.66	0	6					William L. Flick. Lincoln Van Gilder. U. S. Weather Bureau. Frank R. Austin. E. V. C. Hendricks.
Pleasantville.....	Atlantic.....	26	16	.....	.....	.....	.....	.....	.....	.....	1.77	-1.59	0.86	0	6	23	3	4	.....	
Trenton.....	Mercer.....	190	43	43.5	-0.9	76	4	22	24	31	1.62	-1.81	0.93	T.	6	13	10	8	sw.	
Tuckerton.....	Ocean.....	23	21	44.4	+0.4	76	4	10	24	39	1.87	-1.59	0.84	0	6	13	13	4	nw.	
Vineland.....	Cumberland.....	87	46	45.4	+1.5	80	4	15	24	33	1.88	-1.42	1.14	T.	5	18	9	3	nw.	
Woodbine.....	Cape May.....	43	23	42.4	-1.6	76	4	7	24	39	1.90	-1.25	1.10	0	6					Baron de Hirsch Agr. Sch. U. S. Weather Bureau.
Philadelphia, Pa.....		117	44	46.2	+1.3	76	4	26	21	29	1.79	-1.27	1.49	0	6	18	6	6	sw.	
Means and extremes.....				44.1	+0.4	80	4	7	24	48	1.96	-1.53	1.42	0	6	17	8	5	sw.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	25	46.0	+1.8	77	4	20	24	30	1.75	-1.52	1.06	T.	5	13	8	9	sw.	H. E. Denegar. U. S. Weather Bureau. U. S. Weather Bureau. William D. Martin, Jr. U. S. Weather Bureau.
Atlantic City.....	Atlantic.....	16	41	46.0	+0.5	70	2	22	24	26	1.21	-2.02	0.54	0	6	13	10	7	sw.	
Cape May City.....	Cape May.....	17	30	47.3	-0.1	74	4	24	24	25	1.76	-1.46	0.88	0	7	14	13	3	e.	
Long Branch.....	Monmouth.....	25	7	43.9	.....	79	4	18	24	32	2.44	.....	1.07	0	7	14	8	8	w.	
Sandy Hook.....	Monmouth.....	22	.....	.....	.....	.....	.....	.....	.....	.....	2.08	-1.68	1.06	0	5	13	10	7	.....	
Means and extremes.....				45.8	+0.7	79	4	18	24	32	1.85	-1.67	1.07	0	6	18	8	4	sw.	
For the State.....				43.3	+0.4	80	4	6	24	48	2.60	-0.80	3.15	0.7	6	16	8	6	sw.	

† On other dates also.

* One or two years temperature record.

† The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining sections or division means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 day, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

Daily precipitation for November, 1914.

Stations.	Day of month.																															Total.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>The Highlands and Kittatinny Valley.</i>																																	
Belvidere.....		.07						.21							.83	1.09			*	.25												2.45	
Charlotteburg.....		.04						.15			.11				*	3.66			*	.82												4.81	
Calvers Lake.....								.18			T.				.40	1.19			.40	.27		T.	T.									2.44	
Conover.....		.02						.01	.17			.01			*	2.80			*	1.07										.04		4.12	
Dayton.....																																	
Newton.....																																	
Phillipsburg.....		.04						T.	.15						.75	.92			.02	.04										T.		1.72	
Rocky Hill.....		.05						.17							.32	.78			.49	.29												2.10	
<i>The Red Sandstone Plain.</i>																																	
Bayonne.....		.07							.09						.86	1.04			.89	.09												3.04	
Bergen Point.....		.06							.17						1.30	.78			1.02	.14												3.47	
Bloomington II.....		.04						T.	.10			.01			.03	2.68			.78										T.			3.64	
Cantham II.....		.07							.10						.03	3.15				.98												4.33	
Elizabeth.....		.07						T.	.08						.68	1.25			.58	.36									T.			3.02	
Leominster.....		.07						T.		.06		T.			.76	.80			.23	.32										.03		2.27	
Lighthouse.....		.06							.14						.58	2.10			.76	.30												3.94	
Jersey City.....		.07						T.	.15						.79	1.00			1.08	T.		T.							T.			3.09	
Lambertville.....		.07							T.						.72	.40			.14	.17									T.			1.50	
Little Falls**.....		.04							.10						2.75	.26			1.04	.03									T.			4.22	
Newark**.....		.08						T.	.09						.91	1.49			.85	.01										.01		3.44	
New Brunswick.....		.09							.09						.71	1.17			.45	.36												2.87	
Paterson.....		.04						T.	.04						1.38	1.27			.76	.12		T.										3.61	
Plainfield**.....		.10						T.	.15			T.			1.80	.50			.93	T.										.01		3.49	
Summit Plains II.....		.06						T.	.15						.08	2.94				.94												4.17	
Summitville.....		.09							.14						1.13	.76			*	.49										T.		2.61	
South Orange.....		.02						T.	.08						2.06	.46			.80	.03										T.		3.45	
New York, N. Y.***.....		.07							.12	T.					.84	.09			.94	.02										T.		2.08	
<i>The Southern Interior.</i>																																	
Bridgeton.....		.08						T.		.38					1.38	.23			.05											T.		2.12	
Burlington.....		.10							*						1.02	.48			.13											T.		1.73	
Dayton.....		*							.32						1.28	.42			.05	.06												2.13	
Madisonfield.....		.07							.15						1.40	.26			.06	.05											T.		1.99
Manumetown.....		.08							.34						1.42				.30	.02										.01		2.17	
Nightstown.....		*							*						.48	.58			.27	.45												1.78	
Norristown.....		*							.30						.45	.70			.20	.45												2.10	
Indian Mills.....		.04							.28						.88	.37			.10	.28										T.		1.95	
Lakewood.....		.10							.28						.83	.60			.62	.18										T.		2.61	
Loosebottom.....		.08							.18						1.20	.50			.04	.13												2.13	
Northfield.....		.04							.22						.66	.22			.39	.16												1.69	
Leasantsville.....		.04							.22						.86	.15			.47	.03												1.77	
Monticello***.....		.10						T.	.10					T.	.78	.16			.46	.02										T.		1.62	
Muckerton.....		.20							.32						.57	.27			.38	.13												1.87	
Minersville.....		.03						T.	.48						1.14	.13			*	.10												1.88	
Foodbine.....		.05							.20						1.10	.18			.25	.12												1.90	
Philadelphia, Pa.***.....		.09							.15						1.37	.16			.01	.01										T.	T.	1.79	
<i>The Sea Coast.</i>																																	
Asbury Park***.....		.07						T.		.27					.22	.13			1.06	T.										T.		1.75	
Atlantic City.....		.04							.01	.13					.48	.06			.49											T.	T.	1.21	
Cape May City***.....		.03						T.	.05	.20					.86	.12			.49											.01	T.	1.76	
Long Branch.....		.06							.24	.07					.80	.16			1.07	.04										T.		2.44	
Sandy Hook***.....		.10							.04						.84	.04			1.06													2.08	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24 hour period, midnight to midnight.

|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours.

† Separate dates of falls not recorded.

‡ Incomplete.

* Precipitation included in the next following measurement. **Precipitation for 24 hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Hourly velocity.	Wind.			Moisture.	Sun. shine.
	Monthly mean.	Highest.	Date.	Lowest.	Date.		Highest.				
							Miles per hour.	Direction.	Date.		
Atlantic City.....	30.13	30.69	24	29.59	16	9	34	s.	15	68	76
Asbury Park.....	30.09	30.70	29	29.59	16						
Aspe May.....		30.72	24	29.65	16	10	40	se.	15		
Jersey City.....	30.09	30.74	29	29.55	16						70
Long Branch.....	30.08	30.74	29	29.53	20	16	72	e.	15	62	
Newark.....	30.09	30.62	29	29.63	16		32	nw.	6	62	76
New York, N. Y.....	30.08	30.73	29	29.54	16	21	65	se.	15	62	64
Philadelphia, Pa.....	30.14	30.71	24	29.60	16	12	36	sw.	13	65	67
Sandy Hook.....	30.12	30.73	29	29.54	16	20	58	s.	13		
Frenton.....	30.10	30.71	29	29.57	16	13	46	sw.	13	67	66

Daily temperatures for November, 1914.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean
The Highlands and Kittling Valley.																																
Belvidere.....	Maximum	74	61	61	68	62	53	67	62	45	42	58	54	65	58	58	62	39	38	32	41	37	41	38	40	50	58	56	57	56	49	52
	Minimum	34	40	36	36	32	39	30	39	34	20	29	29	32	32	36	36	27	18	22	31	22	22	22	15	24	33	40	23	19	37	29
Charlotteburg.....	Maximum	69	63	60	68	66	48	52	56	53	43	54	52	62	59	48	60	48	35	34	37	33	38	37	34	49	57	55	49	47	46	50
	Minimum	31	48	34	34	40	37	26	41	31	20	26	33	26	36	30	46	26	18	15	30	20	19	13	13	26	40	40	19	12	29	28
Dover.....	Maximum	68	62	58	67	66	47	51	57	39	44	54	51	61	54	59	57	35	34	33	37	31	36	32	36	47	56	50	43	46	45	48
	Minimum	35	47	34	39	39	31	28	34	25	20	29	29	30	33	33	32	26	18	18	27	21	23	14	12	28	40	35	24	16	37	28
Layton.....	Maximum	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Minimum	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Newton.....	Maximum	65	62	57	66	63	48	51	55	50	53	53	51	62	57	50	60	47	32	30	39	39	38	39	34	47	58	56	48	46	46	50
	Minimum	37	45	37	41	48	35	30	40	30	32	31	30	32	31	34	43	25	18	21	29	36	20	26	10	26	35	46	19	17	33	31
Phillipsburg.....	Maximum	69	65	63	69	65	50	55	59	49	45	56	53	64	60	53	62	43	35	34	40	36	41	38	40	52	60	58	49	49	50	52
	Minimum	35	43	38	39	37	41	30	39	33	23	31	31	36	40	40	43	27	21	24	33	23	25	23	19	26	39	45	26	21	39	32
Sussex.....	Maximum	70	64	61	68	64	47	55	55	46	46	58	52	64	59	49	61	45	35	31	38	35	40	36	35	48	53	55	48	47	47	50
	Minimum	36	44	35	41	36	36	31	38	32	21	31	28	30	36	34	44	26	12	20	31	19	19	13	6	26	36	33	21	18	34	28
The Red Sandstone Plain.																																
Bayonne.....	Maximum	70	65	61	76	63	51	54	62	48	45	56	54	66	59	58	62	46	37	37	43	37	42	37	39	50	60	59	48	54	53	53
	Minimum	41	47	40	46	45	41	33	44	34	27	37	37	41	45	46	30	25	28	35	25	27	26	21	31	39	46	28	26	37	35	35
Bergen Point.....	Maximum	69	66	60	76	64	52	52	62	49	45	57	57	65	58	59	62	44	36	39	43	36	41	46	39	50	61	60	45	51	51	52
	Minimum	40	42	39	45	43	40	31	43	35	27	34	28	36	39	45	41	29	24	28	33	24	25	25	19	29	37	37	30	27	28	33
Boonton.....	Maximum	63	61	60	71	58	51	53	62	42	47	58	54	65	58	66	64	45	39	35	43	40	41	38	37	52	60	58	50	53	49	52
	Minimum	32	42	32	35	30	38	25	35	34	23	27	26	30	34	35	41	29	17	20	28	25	24	17	14	25	32	35	21	17	33	28
Elizabeth.....	Maximum	72	67	62	79	68	54	57	64	54	48	60	56	62	62	54	62	51	39	37	44	37	41	38	41	51	62	61	50	54	51	54
	Minimum	36	42	35	41	39	39	27	40	35	22	32	29	32	40	37	51	29	20	22	35	24	22	19	17	28	36	45	27	22	39	32
Flemington.....	Maximum	77	68	63	77	66	54	56	63	52	48	61	57	66	60	54	62	45	39	35	43	40	41	40	40	56	63	60	50	51	48	54
	Minimum	36	44	33	37	36	41	27	35	35	23	28	31	32	40	34	45	29	20	23	34	24	25	24	19	27	35	42	25	23	40	31
Highwood.....	Maximum	69	65	59	76	65	53	54	60	49	44	57	53	64	61	50	61	50	35	37	43	37	41	38	38	49	59	59	49	49	49	52
	Minimum	37	45	32	42	36	40	25	40	35	20	30	27	31	39	38	49	29	20	22	34	25	24	20	17	28	37	34	23	20	34	31
Jersey City.....	Maximum	70	67	59	76	65	53	54	61	49	43	57	55	65	59	57	61	46	36	41	43	39	41	38	37	50	60	61	52	51	51	53
	Minimum	44	48	41	50	47	42	37	40	35	27	39	38	46	41	43	46	30	25	30	35	26	28	26	22	32	40	46	33	30	43	37
Lambertville.....	Maximum	69	66	63	77	73	53	56	64	59	45	57	56	66	62	56	63	51	42	44	42	41	44	44	41	53	57	63	60	50	53	54
	Minimum	38	46	38	41	41	42	31	39	36	27	38	32	37	41	41	50	29	26	29	25	25	29	26	22	32	37	41	30	25	43	34
Little Falls.....	Maximum	66	65	58	74	64	56	54	61	43	45	55	52	60	55	61	63	42	39	36	44	40	42	35	38	51	57	59	45	48	50	51
	Minimum	32	42	37	41	42	32	29	36	31	22	38	31	35	39	40	34	28	21	24	28	24	25	21	19	30	37	34	25	21	35	31
Newark.....	Maximum	70	63	66	76	68	52	57	62	51	47	57	54	66	56	62	56	46	36	38	43	37	41	36	39	51	61	60	54	46	49	53
	Minimum	41	48	41	45	46	41	36	45	30	27	37	38	40	41	42	39	29	24	27	33	23	26	25	20	30	39	46	30	28	39	35
New Brunswick.....	Maximum	68	66	60	79	70	52	55	65	56	43	57	53	65	62	54	63	46	35	37	42	37	40	42	38	52	61	60	51	49	50	52
	Minimum	38	46	36	42	45	42	32	42	35	22	36	32	37	41	39	46	28	24	24	34	24	23	23	18	29	37	47	29	24	41	34
Paterson.....	Maximum	73	69	64	75	67	54	56	63	54	47	61	55	67	62	53	62	49	38	37	44	38	40	39	40	51	60	61	50	53	49	53
	Minimum	35	48	39	42	42	41	30	42	36	27	37	34	35	41	41	49	30	24	26	35	25	27	24	20	31	35	49	29	26	39	34
Plainfield.....	Maximum	70	67	60	78	62	51	55	64	44	46	57	54	65	58	60	63	41	37	45	44	36	40	37	38	51	61	61	48	51	50	53
	Minimum	34	44	36	39	37	37	30	40	33	23	33	30	34	40	39	41	29	22	25	33	24	23	23	16	29	34	45	28	25	42	32
Somerville.....	Maximum	70	66	61	79	69	52	56	65	54	48	59	55	66	63	61	63	50	43	39	43	38	42	39	40	53	65	61	54	50	50	55
	Minimum	32	38	31	34	30	40	28	34	30	19	28	23	29	37	33	47	27	17	22	33	23	20	17	15	24	35	48	22	21	38	29
South Orange.....	Maximum	67	66	58	75	59	57	51	62	41	42	56	57	64	55	61	62	38	35	37	42	35	40	41	37	50	60	59	44	48	49	51
	Minimum	40	45	38	44	43	38	32	40	34	26	35	34	36	40	41	37	29	23	27	32	25	25	24	18	30	37	40	30	27	40	37
New York, N. Y.....	Maximum	66	64	58	73	58	50	52	60	42	46	55	57	63	63	56	59	60	40	36	43	42	37	40	37	39	50	59	59	47	50	52
	Minimum	47	46																													



Scale of Shades.

- 0 to 2 inches.
- 2 to 4 inches.
- 4 to 6 inches.
- 6 to 8 inches.
- Over 8 inches.

Scale Miles
0 50 100 150 200 250 300 350 400 450 500
Kilometers
0 80 160 240 320 400 480 560 640 720 800

UNIVERSITY OF ILLINOIS
URBANA

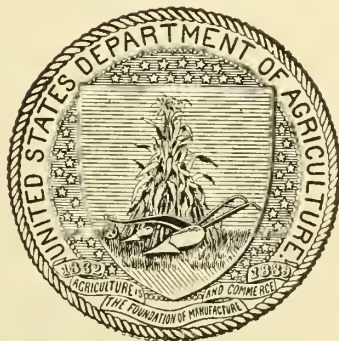
U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU
CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

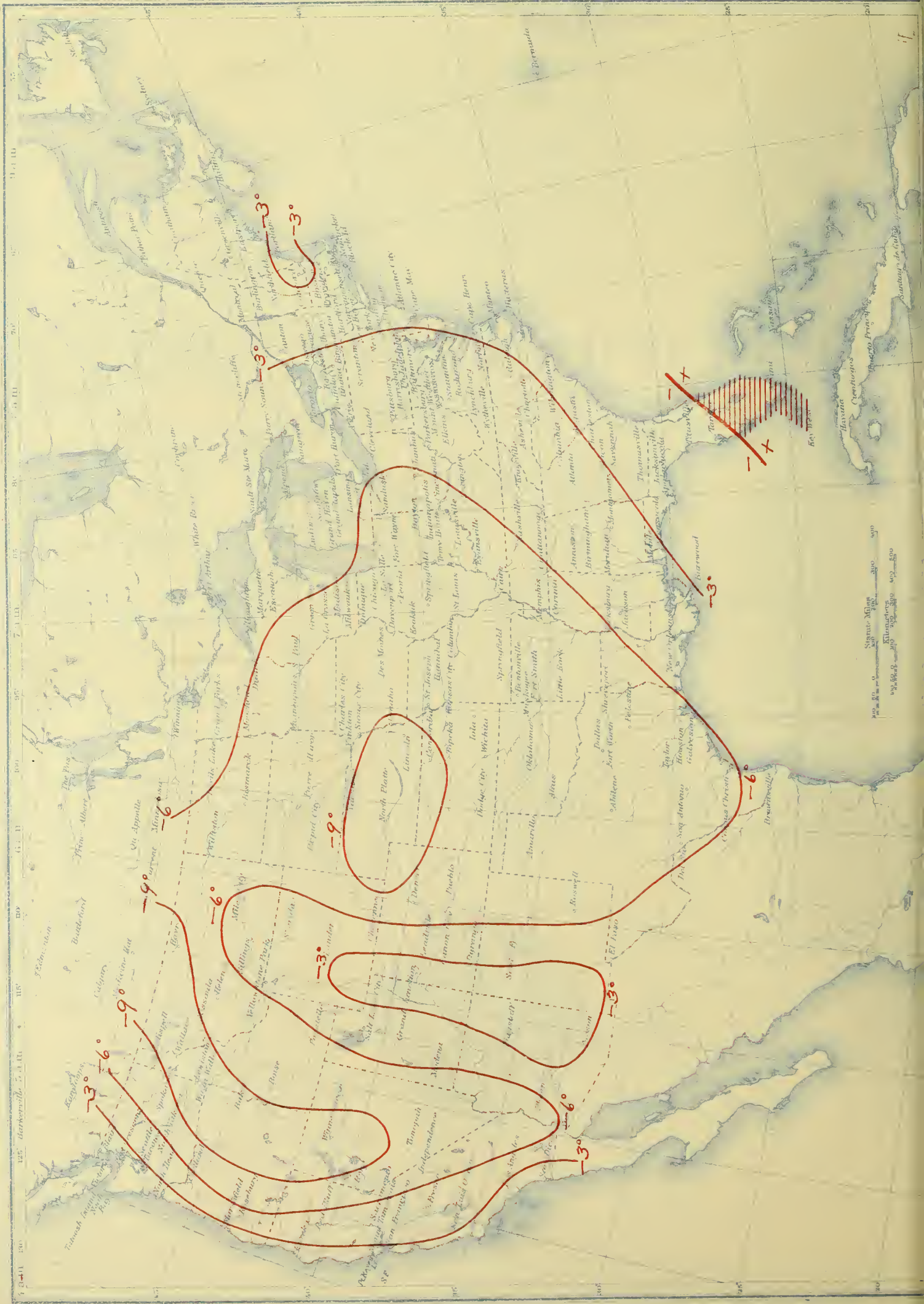
DECEMBER, 1914

BY
G. HAROLD NOYES
SECTION DIRECTOR



TRENTON, N. J.
WEATHER BUREAU OFFICE
JANUARY 16, 1915.

Departure of the Mean Temperature from the Normal, December, 1914.



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Section Director.

VOL. XXVII. TRENTON, N. J., DECEMBER, 1914. No. 12.

GENERAL SUMMARY.

Some of the weather conditions that prevailed in New Jersey in December, 1914 were typical of the winter season, while others were less so. There was more precipitation during the month than in any December since 1902, and most of it occurred in the form of rain. Although it averaged colder than normal, yet the general impression of severe winter weather did not prevail even with one day on which, at some stations, December low temperature readings were broken. The state temperature normal for December is but a fraction of a degree above freezing and when temperatures averaged about a degree below freezing, as was the condition in December this year, the significance is not commonly noted, as it is likely to be above freezing in the daytime, and below freezing only at night. The first five days of the month were exceptionally warm, the 3d averaging some 15° above normal. From the 14th to the 19th, and from the 22d to the 28th it was considerably colder than normal, the coldest days being the 16th, 26th, and 27th. The remaining periods of the month were near normal in temperature.

The days of precipitation after the 1st and 2d, when there was general light rain, mist, and dense fog, were from the 6th to the 9th, inclusive, when there was almost continuous precipitation from sleet, rain, and snow. The other days of precipitation were the 13th, 14th, 19th, 20th, 21st, 24th, and 29th. The principal dates of snow were the 24th, and the 9th in northern sections.

The storm of the 7th was attended by northeast gales and a storm wave that resulted in considerable damage along the shore, especially to summer resorts and residential property, as well as to protective bulkheads.

A barometric depression, whose center was over Delaware at 8 P. M. of the 13th, moved northeastward over this State between that hour and midnight, causing an unusual maximum temperature, from about 11 P. M. to midnight, of about 54°, the highest reading in the month after the 4th. On this night, prior to 9 P. M., the winds were northeasterly; they then suddenly changed to southeast and then through south and southwest to west. When the westerly component entered, the temperature dropped to an ultimate cold wave on the 15th. The second cold wave occurred on the 26th, lasting into the 27th.

The stage of the Delaware River at Trenton averaged 1.1 feet; the highest was 2.0 feet on the 14th, and the lowest, 0.3 foot on the 3d and subsequent dates.

Ice about 9 inches thick was harvested. Sleet and freezing rain effected considerable damage to shrubs, vines, fruit and forest trees, and to commercial wire service during the storm of the 6th to 9th, in northern portions of the State.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 38 stations, was 31.1°, which was 2.0° below normal. The northern highlands averaged 5.6° cooler than the

coast stations. The highest temperature was 66° on the 3d, and occurred at several stations. The lowest temperature was 12° below zero at Culvers Lake on the 27th. The highest monthly mean temperature was 31.6° at Cape May, and the lowest, 26.7° at Dover.

PRECIPITATION.

The average precipitation of the State, as deduced from observations of 45 stations, was 5.86 inches, which was 1.96 inches above normal. The greatest monthly amount was 9.12 inches at Tuckerton, and the least was 2.99 inches at Sussex. The greatest amount of snowfall was 7.5 inches at Culvers Lake, and the average for the State, 2.4 inches. The average number of days on which 0.01 inch or more precipitation occurred was 12, which was 3 above normal. The greatest amount of precipitation in 24 consecutive hours was 4.10 inches at Tuckerton on the 7th-8th.

WIND.

The prevailing wind direction was from the northeast, although there was a large proportion of westerly wind. The average velocity was approximately 14 miles per hour, which was slightly above normal. The highest velocity was 76 miles per hour from the northeast on the 5th at Long Branch. Other days on which the wind reached the force of a gale were the 6th, 7th, 13th, 14, and 23d.

SUNSHINE AND CLOUDINESS.

The average number of clear days during the month was 10; partly cloudy, 6; and cloudy, 15. The average amount of sunshine was approximately 41% of the possible, which was slightly less than normal. The greatest proportion of cloudy days occurred along the coast.

MISCELLANEOUS PHENOMENA.

Atmospheric pressure, reduced to sea level, was 30.17 inches, which was 0.07 inch above normal. Relative humidity averaged approximately 76% which was near the normal. Dense fog prevailed on the 1st, 2d, 3d, and 29th. The principle dates of sleet were the 5th, 6th, 7th, 19th, 21st, 28th, and 29th. Lunar halos were observed on the 3d, 4th, 28th, and 31st.

COMPARATIVE DATA FOR DECEMBER.

Year.	Temperature.			Precipitation.		
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.
1885	35.3	60	6	3.15	4.33	2.47
1886	29.1	60	-2	3.51	4.65	1.62
1887	33.7	62	6	5.29	7.32	3.64
1888	34.9	65	5	3.69	4.95	2.05
1889	41.5	71	8	1.62	3.69	0.25
1890	30.9	56	3	3.89	5.74	2.34
1891	40.9	71	9	4.25	5.32	2.25
1892	30.4	68	1	1.87	3.09	1.30
1893	34.9	70	5	3.39	4.66	1.67
1894	34.8	66	-3	4.36	6.39	1.64
1895	37.2	70	3	2.61	5.42	1.71
1896	31.3	64	-15	1.53	2.70	0.85
1897	35.1	69	-3	4.90	6.44	3.07
1898	33.3	66	-2	3.53	4.85	2.38
1899	35.5	69	-1	2.11	4.30	1.29
1900	34.4	64	-2	2.59	3.97	1.47
1901	32.6	68	-8	7.30	9.45	4.87
1902	31.7	62	-11	7.23	8.99	5.81
1903	28.6	56	-13	4.08	5.49	3.20
1904	27.0	60	-15	3.19	5.38	2.06
1905	36.3	61	5	3.65	5.60	2.58
1906	33.0	70	-5	3.99	6.18	2.70
1907	36.6	70	-3	4.91	7.13	3.55
1908	34.0	72	1	3.63	5.26	2.10
1909	29.8	60	-15	4.45	5.51	3.55
1910	27.5	58	-14	2.79	4.60	1.92
1911	38.4	70	-2	3.77	5.09	2.94
1912	36.9	68	-1	4.73	6.33	3.40
1913	37.7	63	-11	3.03	4.59	1.47
1914	31.1	66	-12	5.33	9.12	2.99

Climatological data for December, 1914.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation, in. or more.	Clear.	Pt. cloudy.			Cloudy.
The Highlands and Kittatinny Valley.																				
Belvidere.....	Warren.....	289	23	28.4	-2.4	59	3	-2	27	25	5.16	+1.02	1.15	.....	12	.....	.....	.....	Samuel J. Hixson.	
Charlotteburg.....	Passaic.....	719	22	28.0	-2.6	61	1	-9	27	36	4.42	+0.03	.....	.....	10	14	10	7	George S. Briggs.	
Culvers Lake.....	Sussex.....	848	13	.....	.....	.....	.....	-12	27	.....	3.05	-0.48	0.82	7.5	13	14	5	12	Brice E. Riker.	
Dover.....	Morris.....	600	30	26.7	-3.4	60	3	-5	27	34	5.61	+1.49	1.15	5.0	9	6	9	16	William C. Harris.	
Newton.....	Sussex.....	678	34	27.4	-1.9	57	3	-6	27	27	3.93	+0.23	0.83	.....	11	13	1	17	Lloyd A. Voorhees.	
Phillipsburg.....	Warren.....	363	32	28.8	-2.5	62	3	-2	27	23	5.01	+1.33	1.50	6.1	12	12	4	15	D. Wilson Smith.	
Sussex.....	Sussex.....	442	24	27.8	-2.0	60	3	-5	27	27	2.99	-0.75	0.67	.....	8	13	2	16	George Dymock.	
Means and extremes.....				27.8	-2.5	62	3	-12	27	36	4.31	+0.41	1.50	6.3	11	12	5	14	nw.	
The Red Sandstone Plain.																				
Bayonne.....	Hudson.....	50	24	31.4	-2.0	65	3	3	27	29	4.28	+0.76	1.44	0.5	12	12	5	14	Erskine R. Eadie.	
Bergen Point.....	Hudson.....	37	17	31.8	-1.2	65	3	4	27	32	5.83	+1.84	1.59	1.5	11	10	9	12	William H. Mitchell.	
Boonton.....	Morris.....	400	24	30.3	.....	63	3	5	26	25	4.51	+0.41	1.59	1.4	11	14	8	9	J. W. Demmers.	
Chatham.....	Morris.....	234	12	.....	.....	.....	.....	.....	.....	.....	5.64	+1.83	1.68	.....	13	.....	.....	.....	Miss M. A. Butler.	
Elizabeth.....	Union.....	45	35	31.2	-2.3	66	3	3	27	25	5.58	+1.79	1.60	2.8	14	9	9	13	L. B. Bonnett.	
Flemington.....	Hunterdon.....	140	26	30.4	-1.6	63	3	-5	27	33	5.65	+1.97	1.48	3.0	16	6	2	13	Hiram E. Deats.	
Highwood.....	Bergen.....	90	25	29.6	-2.8	63	3	0	27	33	5.81	+1.65	1.70	4.6	11	10	9	12	Charles J. Bates.	
Jersey City.....	Hudson.....	10	15	32.0	-2.0	63	3	5	26	29	5.13	+1.57	1.76	2.7	10	10	7	14	S. K. Pearson, Jr.	
Lambertville.....	Hunterdon.....	80	27	33.9	+0.6	63	3	2	27	27	6.15	+2.37	1.35	.....	11	8	10	13	Samuel W. Cochran.	
Little Falls.....	Passaic.....	180	11	30.4	.....	62	3	1	27	25	5.59	+1.75	1.77	2.3	10	12	1	18	Montclair Water Co.	
Newark.....	Essex.....	159	72	32.1	-0.9	65	3	3	27	27	5.26	+1.46	1.64	3.4	11	10	3	18	Prof. William Wiener.	
New Brunswick.....	Middlesex.....	139	61	30.8	-2.3	64	3	2	27	29	4.97	+1.22	1.27	2.2	12	6	14	11	N. J. Experiment Station.	
Paterson.....	Passaic.....	80	43	31.9	-1.2	66	3	3	27	24	5.09	+0.98	1.44	5.1	10	7	13	11	Heber A. Probert.	
Plainfield.....	Union.....	100	28	30.4	-1.5	65	3	2	27	32	5.57	+1.68	1.61	5.4	11	10	7	14	John Neagle.	
Pompton Plains.....	Morris.....	195	12	.....	.....	.....	.....	.....	.....	.....	5.71	+1.97	1.78	2.0	11	.....	.....	.....	M. S. Taylor	
Somerville.....	Somerset.....	60	32	30.5	-1.4	65	3	2	26	34	4.97	+1.40	0.96	.....	11	12	7	12	A. A. Macdonald.	
South Orange.....	Essex.....	200	44	30.6	-1.4	63	3	4	27	33	4.91	+1.08	1.38	5.0	11	13	5	13	Dr. W. J. Chandler.	
New York, N. Y.....	Essex.....	365	44	31.5	-2.9	66	3	4	26	35	4.01	+0.56	1.17	2.4	11	7	7	17	U. S. Weather Bureau.	
Means and extremes.....				31.1	-1.5	66	3	-5	27	34	5.33	+1.51	1.78	3.0	12	11	7	13	ne.	
The Sandstone Interior.																				
Bridgewater.....	Cumberland.....	30	33	32.8	-2.8	65	1	2	27	30	6.13	+2.26	2.15	2.0	12	10	6	15	Henry A. Jorden.	
Burlington.....	Burlington.....	12	28	30.9	.....	62	3	4	26	23	6.65	+2.74	1.90	2.4	11	13	3	15	D. S. B. McCoy.	
Clayton.....	Gloucester.....	126	22	32.0	-2.0	64	3	2	27	33	6.51	+2.82	2.23	.....	13	8	6	17	George L. Wilson.	
Haddonfield.....	Camden.....	75	27	31.5	-1.8	64	3	3	27	30	8.03	+4.38	2.74	1.8	15	9	7	15	Prof. Chas. F. Richardson.	
Hammonton.....	Atlantic.....	163	17	.....	.....	.....	.....	.....	.....	.....	7.47	+3.37	2.36	.....	15	11	3	17	H. J. Rolfe.	
Hightstown.....	Mercer.....	140	22	30.9	-2.7	64	3	1	27	30	5.26	+1.55	1.08	1.0	13	13	3	15	Chas. W. Dunbar.	
Indian Mills.....	Monmouth.....	185	26	30.0	-4.6	65	3	0	26	28	5.15	+1.58	1.15	1.0	12	14	6	11	H. E. Bullock.	
Lakewood.....	Burlington.....	76	25	31.6	-2.4	66	3	-3	27	39	7.33	+3.24	2.00	1.5	13	8	8	15	James M. Armstrong.	
Moorestown.....	Ocean.....	54	11	31.4	.....	63	3	1	27	29	6.88	.....	1.90	1.0	12	7	5	19	R. W. Holman.	
Northfield.....	Burlington.....	75	52	32.2	-1.1	64	3	3	26	32	6.94	+3.36	1.93	2.2	14	8	10	13	Geo. L. Gillingham.	
Pleasantville.....	Atlantic.....	25	7	.....	.....	.....	.....	.....	.....	.....	7.71	.....	2.85	1.0	13	.....	.....	.....	William L. Flick.	
Trenton.....	Atlantic.....	96	16	.....	.....	.....	.....	.....	.....	.....	9.01	+5.34	3.45	1.5	14	.....	.....	.....	Lincoln Van Gilder.	
Tuckerton.....	Mercer.....	190	43	30.6	-3.8	63	3	4	27	28	4.64	+1.48	1.67	2.5	13	8	6	17	U. S. Weather Bureau.	
Vineland.....	Ocean.....	23	21	33.4	-1.1	63	3	2	27	34	9.12	+4.84	4.10	2.0	11	10	6	15	Frank R. Austin.	
Woodbine.....	Cumberland.....	87	46	32.8	-1.6	64	1	2	27	27	6.26	+2.42	1.98	1.3	15	8	10	13	E. V. C. Hendricks.	
Philadelphia, Pa.....	Cape May.....	43	23	34.4	-0.6	66	3	7	26	29	8.14	+4.24	3.00	0.6	14	10	5	16	Baron de Hirsch Agr. Sch.	
Means and extremes.....				31.9	-2.2	66	3	-3	27	34	6.95	+3.12	4.10	1.6	13	10	6	15	ne.	U. S. Weather Bureau.
The Sea Coast.																				
Asbury Park.....	Monmouth.....	22	25	33.4	-1.1	59	3	6	26	19	4.97	+1.33	1.23	1.0	12	10	4	17	H. E. Denegar.	
Atlantic City.....	Atlantic.....	16	41	34.4	-2.0	60	3	8	26	29	8.24	+4.50	3.30	1.2	13	8	4	19	U. S. Weather Bureau.	
Cape May City.....	Cape May.....	17	30	34.6	-3.4	55	2	10	26	26	6.64	+2.86	2.00	0.7	16	6	8	17	U. S. Weather Bureau.	
Long Branch.....	Monmouth.....	25	7	31.3	.....	60	3	5	26	38	6.50	.....	1.63	1.2	14	8	4	19	William D. Martin, Jr.	
Sandy Hook.....	Monmouth.....	22	.....	.....	.....	.....	.....	.....	.....	.....	5.19	+1.34	1.49	0.8	10	7	9	15	U. S. Weather Bureau.	
Means and extremes.....				33.4	-2.2	60	3	5	26	38	6.31	+2.51	3.30	1.0	13	8	6	17	u.	
For the State.....				31.1	-2.0	66	3	-12	27	38	5.86	+1.96	4.10	2.4	12	10	6	15	ne.	

† On other dates also.

‡ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining sections or division means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

Day of month.

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24 hour period, midnight to midnight.

|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. † Separate dates of falls not recorded. ‡ Incomplete.

* Precipitation included in the next following measurement. **Precipitation for 24 hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.			Moist- ure.	Sun- shine.	
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.		Relative humidity, percentage.	Percentage of possible sunshine.	
							Miles per hour.	Direction.			Date.
Atlantic City	30.18	30.61	26	29.44	13	9	40	ne.	7	79	40
Bury Park	30.17	30.61	26	29.56	14						
De May		30.63	17	29.46	13	10	38	ne.	5		
De May City	30.15	30.61	26	29.48	14						47
Long Branch	30.18	30.64	26	29.48	14	18	76	ne.	5	76	
Long Beach	30.15	30.53	26	29.40	14		24	w.	14	67	46
New York, N. Y.	30.16	30.62	26	29.47	14	17	62	s.w.	14	70	43
Philadelphia, Pa.	30.18	30.61	17	29.44	13	12	31	ne.	6	80	40
Sandy Hook	30.17	30.63	26	29.49	14	20	66	ne.	5	73	34
Wilmington	30.16	30.62	26	29.49	13	13	42	ne.	7	83	39

Daily temperatures for December, 1914.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Me.		
<i>The Highlands and Kittatinny Valley.</i>																																		
Belvidere.....	Maximum	56	58	59	45	39	35	34	34	33	37	38	38	38	30	24	21	29	33	37	38	30	28	25	27	21	23	33	33	41	38	33		
	Minimum	43	41	42	32	28	28	31	32	29	27	24	26	17	30	7	9	9	4	14	27	26	20	12	15	15	21	23	33	33	41	38	33	
Charlotteburg.....	Maximum	61	57	59	59	38	34	33	33	32	39	43	38	31	42	24	23	23	31	35	39	38	38	27	23	20	14	27	37	36	42	40		
	Minimum	43	36	47	31	31	27	29	30	27	26	25	22	9	24	5	8	9	-1	18	25	23	20	13	15	13	1	-9	11	15	31	21	21	
Dover.....	Maximum	56	56	60	42	36	33	32	32	30	34	36	32	46	48	18	23	24	29	36	36	36	29	24	23	24	13	25	34	32	41	37	33	
	Minimum	40	40	42	31	29	27	32	29	28	28	27	17	14	14	5	8	8	2	12	26	24	13	14	15	11	-1	-5	10	18	30	10	10	
Layton.....	Maximum	55	55	57	54	34	35	34	34	34	32	36	36	29	44	25	22	22	25	34	37	38	39	26	26	20	11	21	31	33	41	33	33	
	Minimum	40	40	42	31	29	26	29	29	27	26	25	23	15	23	4	6	7	4	23	25	24	19	12	14	10	-6	13	18	31	20	20	2	
Newton.....	Maximum	56	57	62	54	41	36	33	34	33	35	38	35	31	43	23	22	25	28	33	38	38	31	27	25	26	16	20	35	33	41	37	33	
	Minimum	46	40	47	33	32	28	31	32	29	28	29	26	18	23	7	9	11	7	17	27	27	22	15	18	15	3	-2	12	20	32	23	2	
Phillipsburg.....	Maximum	58	57	60	51	34	34	34	33	31	35	38	35	28	38	24	25	25	29	33	37	39	40	26	23	28	14	-7	11	15	29	14	2	
	Minimum	43	38	49	31	29	27	30	30	27	27	26	23	13	23	5	8	8	2	13	25	24	19	12	14	11	0	11	15	29	14	2	2	
Sussex.....	Maximum	56	57	62	54	41	36	33	34	33	35	38	35	31	43	23	22	25	28	33	38	38	31	27	25	26	16	20	35	33	41	37	33	
	Minimum	46	40	47	33	32	28	31	32	29	28	29	26	18	23	7	9	11	7	17	27	27	22	15	18	15	3	-2	12	20	32	23	2	
<i>The Red Sandstone Plain.</i>																																		
Bayonne.....	Maximum	47	56	65	52	40	37	36	36	35	39	42	39	43	54	26	26	28	31	36	39	39	38	28	25	27	17	26	36	34	45	38	3	
	Minimum	43	42	50	35	35	30	33	33	30	29	29	29	24	25	11	13	15	14	20	29	28	25	19	19	16	4	3	18	27	32	26	2	
Bergen Point.....	Maximum	49	57	65	53	41	36	36	36	36	47	46	40	45	53	21	28	34	31	35	39	38	38	29	25	28	18	4	26	36	34	45	36	2
	Minimum	43	43	49	36	34	30	33	32	30	29	27	25	21	10	11	16	11	19	29	29	26	19	19	18	5	4	14	26	30	31	21	2	
Boonton.....	Maximum	57	59	63	52	40	36	35	36	34	36	35	37	34	52	27	25	26	33	33	37	40	40	27	28	23	16	25	37	34	45	38	3	
	Minimum	44	37	50	34	35	28	33	33	33	28	29	26	17	27	9	12	14	6	12	28	25	21	17	17	5	7	17	19	32	25	25	3	
Elizabeth.....	Maximum	49	58	66	51	41	37	35	36	35	40	41	38	34	54	29	27	29	33	35	40	39	38	29	25	27	18	28	39	33	46	40	3	
	Minimum	45	45	50	33	36	30	33	34	31	29	27	21	29	10	10	13	8	15	28	28	25	18	16	18	5	3	12	23	33	25	2		
Flemington.....	Maximum	51	57	63	55	41	36	35	37	35	38	38	37	31	49	25	26	29	34	40	39	38	30	25	27	17	28	39	33	42	38	3		
	Minimum	46	44	50	34	36	29	32	33	30	28	29	28	21	25	10	11	13	7	14	28	29	24	14	17	16	3	-5	11	20	32	25	2	
Highwood.....	Maximum	49	58	63	45	38	35	35	34	37	40	36	45	53	22	27	27	30	35	38	38	36	29	26	28	15	26	35	33	46	38	3		
	Minimum	41	40	43	34	32	29	32	31	29	25	29	24	20	20	10	13	13	7	15	28	28	23	18	17	13	2	0	13	20	32	27	3	
Jersey City.....	Maximum	50	57	63	50	43	36	36	36	36	38	41	38	48	53	24	27	28	30	35	38	40	40	36	30	26	28	16	26	34	35	45	37	2
	Minimum	46	44	49	37	34	30	32	34	32	30	31	32	26	24	11	14	15	16	24	30	30	26	20	21	16	5	5	19	29	32	27	2	
Lambertville.....	Maximum	55	57	63	61	50	47	42	44	45	43	41	42	37	56	30	28	32	33	40	43	40	41	33	32	31	29	2	14	26	34	47	38	3
	Minimum	48	47	51	35	38	32	37	34	33	32	32	31	24	29	12	12	16	11	19	31	31	26	19	22	18	2	2	14	26	34	27	2	
Little Falls.....	Maximum	53	59	62	49	49	37	35	36	35	39	41	37	52	57	23	27	27	31	39	45	40	36	30	27	28	16	2	1	14	25	29	2	
	Minimum	41	42	41	34	31	29	31	30	29	28	29	23	20	16	13	13	9	9	28	30	30	20	18	19	11	2	1	14	25	29	2		
Newark.....	Maximum	49	58	65	55	42	35	36	38	38	39	42	39	43	53	29	26	28	31	40	37	40	36	30	26	24	19	3	3	19	32	47	38	3
	Minimum	47	44	51	36	36	28	31	32	29	28	29	25	29	9	13	15	14	19	30	29	25	19	19	21	4	3	19	32	47	31	26	2	
New Brunswick.....	Maximum	51	57	64	58	42	37	35	36	37	38	39	37	32	54	26	23	27	32	35	38	40	40	29	25	27	18	2	3	37	33	44	38	3
	Minimum	44	44	48	33	36	29	32	32	29	29	29	28	22	25	10	11	13	9	17	29	29	25	18	17	5	2	15	25	32	26	2		
Paterson.....	Maximum	50	60	66	55	40	37	35	36	35	38	42	39	34	51	27	26	29	32	37	40	40	40	29	26	29	19	3	35	34	48	38	3	
	Minimum	44	42	51	36	36	28	33	33	30	29	31	30	29	27	10	14	15	13	20	30	30	28	25	19	19	5	3	18	23	33	26	2	
Plainfield.....	Maximum	48	59	65	52	38	34	35	37	34	39	41	37	37	54	22	24	27	30	35	38	39	37	29	25	27	16	23	36	33	45	38	3	
	Minimum	44	44	51	34	34	29	33	32	30	27	27	22	22	10	11	14	8	16	29	30	30	25	16	16	5	2	2	12	23	32	25	2	
Somerville.....	Maximum	50	57	65	55	44	39	44	36	35	40	39	37	39	52	25	21	28	34	35	38	39	38	31	35	26	20	2	9	39	33	44	39	2
	Minimum	44	44	49	30	35	29	32	32	30	29	27	27	25	18	9	10	14	6	11	28	26	24	12	12	10	5	4	17	26	32	24	2	
South Orange.....	Maximum	49	58	63	51	38	34	35	36	36	36	40	36	49	53	20	25	26	30	37	40	35	33	28	26	26	15	5	4	35	35	36	38	3
	Minimum	40	45	51	38	33	29	32	31	30	30	29	24	20	10	13	15	14	19	30	30	21	18	19	15	5	4	17	26	32	24	2		
New York, N. Y.	Maximum	5																																



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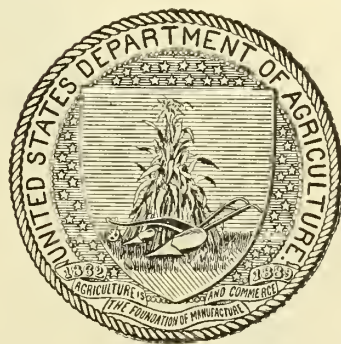
U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU
CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

ANNUAL SUMMARY, 1914

BY
G. HAROLD NOYES
SECTION DIRECTOR



TRENTON, N. J.
WEATHER BUREAU OFFICE
FEBRUARY 11, 1915

ANNUAL MEAN ISOTHERMS AND PREVAILING WIND DIRECTION, 1911



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Section Director.
TRENTON, N. J.

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GENERAL SUMMARY.

A descriptive analysis of general weather conditions in New Jersey in 1914, reduces briefly to the fact, that it was a cool, dry year. Seven months were below normal in temperature, the coldest being February, averaging 25.5° , or 4.5° below normal. August was the warmest month, instead of July, as is usually the case, and averaged 73.3° , or 1.3° above normal. Temperatures of 97° to 99° occurred in each month from May to September, inclusive. It was below zero in each of the four coldest months. Eighteen stations were below normal in temperature, and the remainder normal, or but slightly above. The highest annual mean temperature was 53.9° at Bridgeton, and the lowest, 47.5° at Dover. The highest temperature of the year, 99° , occurred at three stations on September 22d, and the extreme lowest was 18° below zero at Culvers Lake on January 14th. In but five other years since 1887 has the temperature remained under 100° .

The precipitation record is the notable feature of the year. Less amounts of precipitation were recorded only in the years 1904 and 1895. The accumulation of the deficiency was remarkably constant. January was normal, February and March deficient, April had about two day's rain above normal, May and June deficient. July had sufficient excess to balance the deficiency of June, but being the warmer month, with greater evaporation, the gain was nearly obliterated. August, September, October, and November were all drier than normal, while December showed the greatest excess since October, 1913. Taking the past two years into consideration, there have been but six months wherein there was an excess of precipitation. The greatest annual amount was 46.27 inches at Lakewood, and the least was 30.08 inches at Trenton. The greatest deficiency in precipitation was 14.42 inches at Paterson, and the least, 0.94 inch at Atlantic City. The average number of days on which measurable precipitation occurred was 107; clear, 130; partly cloudy, 107; cloudy, 105. The prevailing wind direction was from the northwest.

THE WEATHER BY MONTHS.

JANUARY.—The weather appeared to be very unseasonable, due chiefly to the fact that most of the precipitation occurred in warm periods, hence there was little snow. Then again, the temperature averaging almost exactly freezing, resulted in most of the daytime being several degrees above freezing, and only going below freezing at night. In amount of precipitation there was no variation from the usual occurrence, but as there was so little snow, the rainfall gave the impression of being much above normal. Disagreeably stormy weather prevailed from the 3d to 5th, and on the 24th, 25th, and 31st, resulting from the approach of typical cyclonic disturbances. Dense fog of the 27th, 29th, and 30th, was noteworthy for its permeance, in many instances it being visible within large buildings.

FEBRUARY.—A distinctly pronounced type of winter weather prevailed. The personal impression of severity was unduly heightened by the continuous warm weather of the last five days of January and the first seven days of February, when the thermometer averaged from near freezing to ten to fifteen degrees above freezing. But from the 8th to 26th, inclusive, the weather was steadily cold; below freezing every night, even at Cape May, and only occasionally above freezing during the day,

except along the shore. During this period five general snow storms fell, and the snow consequently remained on the ground with but little diminution. All bodies of water were frozen and a better harvest of ice was secured than for several winters past. Ice in the Delaware River was over a foot thick at tide water. In the bays in some instances ice froze to the bottom on shallow bars and damaged oyster beds.

MARCH.—The month opened with one of the most severe storms of snow, sleet, and ice on record and serious damage was done to electric wires, trees, and shrubs in the northern half of the State. The wind reached 72 miles per hour velocity, and the pressure fell to 28.40 inches. Snow remained on the ground until the middle of the month, when a warm wave melted it. Ice covered nearly all bodies of water, and the weather was unusually clear with fresh northwesterly winds. There were but two warm periods in the month, from the 15th to the 18th, and from the 25th to the 28th; the first, however, caused the greatest change, owing to the fact that mean temperatures passed at that time from slightly below freezing to well up in the forties and hence caused rapid melting.

APRIL.—Vegetable and animal life emerged from winter quarters somewhat later than usual. Snow was almost entirely absent, but cool nights and frosts continued to delay out-door progress. The coldest period was from the 3d to the 6th, the lowest readings at nearly all stations being on the 4th, ranging from 15° to 28° . The warmest period was from the 17th to the 20th, the warmest day being the 19th, with temperatures ranging from 66° to 89° . In most instances, the warm weather occurred with rain storms, and the fair weather was cold. On the 15th, northeast gales of hurricane force on the coast were the cause of the wreck of a schooner on the beach at Long Branch, and the attending loss of eight lives. Rainfall was very evenly distributed over the State and in but few instances at any station were there more than two successive days without rain.

MAY.—With two exceptions it was the warmest May on record, temperatures running up to 95° to 98° on the 27th. With the warm weather, high percentage of sunshine, and absence of rain, the weather was very favorable for out-door pursuits; but, so far as agriculture was concerned, these benefits were negated by a total lack of rain from the 15th to the 27th. In the Southern Interior, the showers of the 27th were insufficient to moisten the parched soil, and the month closed with vegetation suffering in that portion of the State. Over the remainder of the State, the rains of the 27th and 30th were more generous and agriculture showed greater promise. In many places in the northern part of the State, the last killing frost of the season occurred on the 1st. Thunderstorms of the 9th and 27th were attended by some hail.

JUNE.—Both temperature and rainfall were slightly subnormal, thus rendering the weather for the month unusually favorable for out-of-door life. The serious feature of the weather conditions was the effect on agriculture resulting from the lack of rain, coupled with a deficiency in this element from the commencement of the growing season and a lack of ground water from an unusually dry winter. The counties along Delaware Bay and the lower reaches of the Delaware River were the worst sufferers from the drought, and some early garden crops, such as asparagus and strawberries, yielded but poor return. The lowest temperatures of the month occurred on the 6th and 17th, and were accompanied by light frosts in the cranberry bogs and in the northern highlands. The 25th was the warmest day of the month.

JULY.—The mid-summer month, usually from three to five degrees warmer than June, averaged more than 2° below normal, with consequent beneficial result in general personal comfort. The skies were overcast much of the time, thus further ameliorating the usual discomfort of this month. Together with the subnormal temperature, the deficiency of rain, accumulating

from the commencement of the growing season, continued well into the middle of the month, but was then terminated by successive showers. Drought conditions were rapidly overcome the latter half of the month by generally copious amounts of rain, except in the southern half of Cape May County, and the southwestern half of both Salem and Cumberland counties, where vegetation suffered. On the whole, the condition of crops at the close of the month was above average.

AUGUST.—Unusually pleasant weather prevailed during the month, owing to a deficiency of rain and cloudiness, and not too great heat, although temperatures averaged about a degree above normal. August "dog days", when temperature and humidity are both excessive, were not so frequent as heretofore, and the general personal feeling of discomfort was considerably mitigated. The days of rainfall were fairly evenly distributed through the month, so that there was but little unfavorable effect on vegetation owing to the reduced amount, and nearly all out-door pursuits were more than ordinarily benefitted by the pleasant weather. Nearly all of the rainfall attended thunder storms, some of which were severe. The storm of the 21st did some damage both by hail and lightning, but there was little ill effect from wind. The general crop situation at the close of the month was definitely better than in recent years.

SEPTEMBER.—The month was more than 9° colder than August, and slightly below the monthly normal. The amount of sunshine and cloudlessness was unusually large. There were two distinctly cold periods, from the 8th to the 16th, and the 25th to the 30th. On the 29th, the lowest temperature was 24°, which has been exceeded only in September, 1904. These details, however, are of meagre significance in comparison with the absence of rain. The usual September rainfall is about 4.2 inches, but this year the state average was but 0.37 inch, which was the driest since prior to 1884. At a few stations it was the driest month on record, and at many, it was the driest September on record. Dry Septembers in previous years have usually been preceded by wet Augusts, but this year, August was considerably drier than normal, and August and September together were the driest two consecutive months on record.

OCTOBER.—The month continued dry. There were but few stations throughout the State but that have had a deficiency in rainfall in each of the past three months. Natural streams and lakes were lower than ever before shown on official records, and the memory of the "oldest inhabitant" recalls no lower water in the Delaware River just above Trenton in over forty years. The gauge readings of the river at Trenton fluctuated just above and below zero, averaging zero. A period of rain in the middle of the month saved practically all seed previously sown. The temperature averaged 6° lower than September and 4° above normal, which, in connection with the dry weather, greatly favored all out-door activities, not demanding rain.

NOVEMBER.—Temperature and precipitation were nearly normal, but there was considerably more sunshine than usual. There were three warm periods in the month, between which temperatures were markedly below normal. In a briefer period than 24 hours, temperatures fell more than 30°, on the 16th-17th, and to readings several degrees below freezing. The deficiency in precipitation was sufficient to make the shortage in water supply keenly felt; wells, streams, and lakes were very low and in some cases failed entirely. The gauge reading in the Delaware at Trenton averaged 0.1 foot for the month, and for several days the stage was 0.2 foot below zero. There were but 17 days on which a measurable amount of precipitation fell in September, October, and November. In northern portions of the State approximately 5 inches of snow fell on the 19th-20th.

DECEMBER.—There was more precipitation during this month than in any December since 1902, and the greater portion of it occurred in the form of rain. While it averaged colder than normal, the small quantity of snow allayed the impression of severe winter weather, even with some record-breaking low tem-

peratures. Temperature averaged 2° below normal, and precipitation 2 inches above normal, the latter being the largest excess over a monthly normal since October, 1913. There were several storms of note, that on the 7th was attended by north-east gales and a storm wave along the coast that was damaging to summer resort and residential property, and to protective bulkheads. The highest temperature in the month, subsequent to the 4th, occurred about midnight of the 13th, and attended the movement of a storm center along the coast to the north-eastward.

COMPARATIVE ANNUAL DATA FOR THE STATE.

Year.	Temperature.			Average precipitation.	Year.	Temperature.			Average precipitation.
	Mean.	Highest.	Lowest.			Mean.	Highest.	Lowest.	
1887	51.1	101	-6	47.66	1902	51.8	100	-11	59.44
1888	50.0	99	-12	52.20	1903	51.7	100	-16	56.25
1889	52.8	95	-3	63.33	1904	49.3	100	-34	37.41
1890	53.2	101	0	49.34	1905	51.3	102	-18	42.06
1891	53.2	102	1	47.98	1906	52.8	98	-15	46.38
1892	51.4	105	-6	42.04	1907	50.4	96	-22	51.65
1893	50.8	103	-21	47.90	1908	52.6	106	-17	42.58
1894	53.0	106	-11	47.37	1909	52.0	100	-15	40.86
1895	51.7	109	-12	37.29	1910	52.0	99	-15	39.73
1896	51.7	105	-15	42.51	1911	52.6	104	-12	50.36
1897	52.0	102	-6	51.72	1912	51.3	100	-32	46.61
1898	53.2	107	-15	52.35	1913	54.2	100	-11	46.99
1899	52.1	103	-21	45.84	1914	51.4	99	-18	39.23
1900	53.8	104	-9	42.71					
1901	51.4	107	-8	51.80					

MONTHLY STATE DATA FOR 1914.

Month.	Temperature.				Precipitation.			
	Mean.	Departure from normal.	Highest.	Lowest.	Average.	Departure from normal.	Greatest.	Least.
January	31.9	+1.9	73	-18	3.85	00.0	6.15	1.95
February	25.5	-4.5	67	-17	2.85	-1.03	4.94	1.89
March	35.4	-2.6	75	-6	3.65	-0.37	6.45	2.02
April	48.4	-0.7	89	15	3.67	+0.18	4.78	2.35
May	63.1	+2.8	98	30	2.57	-1.30	5.09	0.95
June	68.5	-0.8	98	35	2.66	-1.17	4.85	1.09
July	71.5	-2.3	97	40	6.05	+1.17	8.57	1.94
August	73.3	+1.3	98	42	3.15	-1.87	6.53	1.04
September	64.0	-1.6	99	24	0.37	-3.58	1.64	0.14
October	58.1	+4.0	88	19	1.99	-1.69	3.08	0.90
November	43.3	+0.4	80	6	2.60	-0.80	4.81	1.21
December	31.1	-2.0	66	-12	5.33	+1.96	9.12	2.99
Year	51.4	-0.1	99	-18	39.23	-8.14	9.12	0.14

* Mean of 33 stations.

** Mean of the sums of 38 stations.

KILLING FROSTS.

Stations.	Last in spring.	First in autumn.	Stations.	Last in spring.	First in autumn.
<i>The Highlands and Kittatinny Valley.</i>			<i>The Southern Interior.</i>		
Belvidere	May 1	Sept. 29	Bridgeton	Apr. 14	Oct. 28
Charlotteburg	Apr. 24	do. 29	Burlington	do. 14	do. 28
Culvers Lake	May 1	do. 10	Clayton	do. 14	do. 28
Dover	do. 1	do. 29	Haddonfield	Apr. 14	do. 28
Newton	Apr. 24	do. 28	Lightstown	do. 24	Sept. 29
Phillipsburg	do. 14	do. 29	Imlaystown	do. 24	Oct. 28
Sussex	do. 24	do. 29	Indian Mills	do. 24	do. 28
<i>The Red Sandstone Plain.</i>			Lakewood	do. 24	do. 28
Bayonne	Apr. 14	Oct. 28	Moorestown	do. 24	do. 28
Bergen Point	do. 28	do. 28	Trenton	do. 6	do. 28
Boonton	do. 28	Sept. 29	Tuckerton	May 1	do. 28
Elizabeth	Apr. 24	Oct. 28	Vineland	Apr. 14	do. 28
Flemington	do. 24	do. 28	Woodbine	do. 24	Sept. 28
Highwood	May 1	Sept. 28	<i>The Sea Coast.</i>		
Jersey City	Apr. 14	Oct. 28	Asbury Park	Apr. 14	Oct. 28
Lambertville	do. 24	do. 28	Atlantic City	do. 6	Nov. 10
Little Falls	do. 28	Sept. 29	Cape May	do. 4	Nov. 10
Newark	Apr. 14	Oct. 28	Long Branch	do. 14	Oct. 28
New Brunswick	May 1	do. 28	Sandy Hook	do. 14	Nov. 10
Paterson	Apr. 14	do. 28			
Plainfield	do. 24	do. 28			
Somerville	May 1	Sept. 29			
South Orange	Apr. 14	Oct. 28			

Climatological Data for the Year 1914.

STATION.	Counties.	Elevation, feet.	Temperature (degrees Fahrenheit).						Precipitation (in inches).										Sky.				Prevailing direction of wind.
			Length of record, years.	Annual mean.	Highest.	Date.	Lowest.	Date.	Length of record, years.	Total for the year.	Greatest monthly.	Month.	Least monthly.	Month.	Total snowfall (unmelted).	Number days with .01 or more.	Number clear days.	Number partly cloudy days.	Number cloudy days.				
The Highlands and Kittatinny Valley.																							
Albion	Warren	289	23	49.9	95	†May 27	-5	†Jan. 14	23	39.49	6.13	July	0.14	Sept	.....	104	.....	.....	.....	nw.			
Charlotteburg	Passaic	719	22	47.7	96	Sept. 22	-10	†Jan. 14	22	44.83	6.45	Mar	0.33	Sept	.....	89	.....	.....	.....	e.			
Calvers Lake	Sussex	848	.....	.....	.....	.....	-18	Jan. 14	13	34.44	4.89	July	0.36	Sept	69.3	129	.....	.....	.....	.....			
Conover	Morris	600	30	47.5	94	May 27	.....	.....	30	42.01	7.55	July	0.36	Sept	56.6	110	.....	.....	.....	.....			
Newton	Sussex	678	34	48.2	94	May 27	-9	Jan. 14	34	.....	6.62	July	0.35	Sept	.....	.....	.....	.....	.....	n.			
Phillipsburg	Warren	363	24	50.9	96	Aug. 9	-5	Jan. 14	32	36.56	6.27	July	0.33	Sept	44.2	115	190	77	98	nw.			
Sussex	Sussex	442	20	.....	95	May 27	-12	†Jan. 14	24	.....	5.09	May	.....	.....	.....	.....	.....	.....	.....	nw.			
The Red Sandstone Plain.																							
Bayonne	Hudson	50	24	51.7	96	†Aug. 19	-4	Jan. 14	24	36.96	5.37	July	0.20	Sept	34.7	112	169	74	122	n.			
Bergen Point	Hudson	37	17	.....	95	May 27	-4	Jan. 14	17	43.09	7.26	July	0.23	Sept	39.2	96	.....	.....	.....	nw.			
Bonton	Morris	400	1	.....	.....	.....	.....	.....	24	37.53	5.32	July	0.38	Sept	30.3	113	.....	.....	.....	.....			
Clatham	Morris	234	.....	.....	.....	.....	.....	.....	12	41.63	6.33	July	0.53	Sept	.....	117	.....	.....	.....	.....			
Elizabeth	Union	45	35	52.0	98	†May 27	-7	Feb. 25	35	42.20	6.55	July	0.26	Sept	41.1	114	135	131	99	nw.			
Hemington	Hunterdon	140	17	51.4	99	Sept. 22	-7	Feb. 16	26	36.95	5.65	Dec	0.29	Sept	40.5	115	199	72	94	w.			
Highwood	Bergen	90	25	49.3	93	May 27	-9	Feb. 25	25	42.09	5.88	July	0.38	Sept	39.7	100	125	110	130	nw.			
Irsey City	Hudson	10	15	52.7	97	May 27	-3	Jan. 14	15	42.13	7.02	July	0.19	Sept	40.4	106	132	114	119	nw.			
Lambertville	Hunterdon	80	27	53.2	97	Aug. 9	-4	Feb. 26	27	31.06	6.15	Dec	0.26	Sept	.....	94	.....	.....	.....	sw.			
Little Falls	Passaic	180	1	.....	.....	.....	.....	.....	11	39.43	6.59	July	0.21	Sept	36.8	111	.....	.....	.....	.....			
Newark	Essex	159	71	52.6	98	Aug. 19	-5	Jan. 14	72	43.41	7.39	July	0.33	Sept	40.8	113	147	68	150	sw.			
New Brunswick	Middlesex	139	61	50.1	96	Sept. 22	-4	Jan. 14	61	36.69	5.33	July	0.41	Sept	35.9	102	167	113	85	w.			
Paterson	Passaic	80	43	52.3	98	†Sept. 21	-4	Jan. 14	43	36.99	5.09	Dec	0.33	Sept	43.0	112	96	183	86	s.			
Plainfield	Union	100	28	51.0	95	†May 27	-5	Feb. 25	28	42.81	7.59	July	0.38	Sept	47.0	111	126	128	111	sw.			
Ramptom Plains	Morris	195	.....	.....	.....	.....	.....	.....	12	43.31	6.30	July	0.52	Sept	37.0	106	.....	.....	.....	.....			
Romerville	Somerset	60	32	50.9	99	Sept. 22	-7	Feb. 25	32	36.91	5.57	July	0.54	Sept	.....	97	.....	.....	.....	nw.			
South Orange	Essex	200	44	50.5	63	May 27	-4	†Jan. 13	44	40.86	7.31	July	0.30	Sept	43.0	103	159	102	104	w.			
New York, N. Y.	.....	365	44	51.3	95	Aug. 19	-5	Jan. 14	44	33.50	5.13	July	0.20	Sept	39.2	111	96	114	155	nw.			
The Southern Interior.																							
Ridgelyton	Cumberland	30	28	53.9	98	†May 27	0	†Jan. 14	33	32.81	6.13	Dec	0.59	Sept	30.0	90	185	74	106	w.			
Burlington	Burlington	12	1	52.1	98	May 27	-3	†Feb. 25	28	38.05	6.65	Dec	0.62	Sept	36.9	94	228	48	89	nw.			
Wayton	Gloucester	126	18	.....	.....	.....	-1	†Jan. 14	22	.....	8.54	July	0.21	Sept	.....	.....	.....	.....	.....	.....			
Madonfield	Camden	75	20	52.6	96	May 27	-3	Jan. 14	27	42.61	8.57	July	0.41	Sept	51.2	112	131	151	83	nw.			
Rightstown	Mercer	140	22	.....	97	May 27	.....	.....	22	.....	5.26	Dec	0.27	Sept	.....	.....	.....	.....	.....	.....			
Maystown	Monmouth	185	26	.....	99	Sept. 22	.....	.....	26	.....	6.02	July	0.30	Sept	.....	.....	.....	.....	.....	sw.			
Indian Mills	Burlington	76	25	52.1	98	Sept. 22	-7	Feb. 25	25	41.76	7.33	Dec	0.36	Sept	48.5	108	164	118	83	nw.			
Wakewood	Ocean	54	11	50.7	97	May 27	-4	Jan. 14	11	46.27	6.88	Dec	0.20	Sept	40.5	102	.....	.....	.....	nw.			
Moorestown	Burlington	75	52	53.0	97	May 27	-6	Feb. 25	52	37.85	8.10	July	0.40	Sept	42.0	97	.....	.....	.....	nw.			
Northfield	Atlantic	25	.....	.....	.....	.....	.....	.....	7	38.57	7.71	Dec	0.50	Sept	27.5	117	.....	.....	.....	.....			
Peasantville	Atlantic	26	.....	.....	.....	.....	.....	.....	16	.....	9.01	Dec	0.38	Sept	.....	109	.....	.....	.....	.....			
Reinton	Mercer	190	43	51.7	95	Sept. 22	-4	Jan. 14	43	30.08	4.75	July	0.41	Sept	39.9	107	124	108	133	nw.			
Rockerton	Ocean	23	16	51.8	98	May 27	-6	Feb. 25	21	43.84	9.12	Dec	0.46	Sept	42.0	104	174	114	77	nw.			
Shelton	Cumberland	87	46	53.1	98	†May 27	-6	Mar. 21	46	34.39	6.26	Dec	0.28	Sept	26.3	104	185	118	62	nw.			
Goodbine	Cape May	43	23	51.5	95	†May 27	-4	Mar. 21	23	40.21	8.14	Dec	1.09	Jun	.....	108	.....	.....	.....	.....			
Philadelphia, Pa.	.....	117	44	54.3	96	July 22	0	Jan. 14	44	39.07	7.75	July	0.86	Sept	34.1	103	119	115	131	n v.			
The Sea Coast.																							
Shirley Park	Monmouth	22	25	51.4	94	July 23	-6	Jan. 14	25	.....	5.32	July	0.15	Sept	.....	.....	.....	.....	.....	nw.			
Atlantic City	Atlantic	16	41	52.2	93	June 12	-1	Jan. 14	41	39.88	8.24	Dec	0.26	Sept	34.7	114	125	99	141	sw.			
Cape May City	Cape May	17	30	53.2	95	June 12	3	Jan. 14	30	36.10	6.64	Dec	0.46	Sept	33.3	117	127	148	90	nw.			
Long Branch	Monmouth	25	7	50.2	96	Sept. 2	-6	Jan. 14	7	44.35	6.50	Dec	0.21	Sept	57.2	118	130	94	141	nw.			

† On other dates also.

Monthly and Annual Precipitation for the Year 1914, with Departures from the Normal.

STATIONS.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.		Annual.	
	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.
<i>The Highlands and Kittatinny Valley.</i>																										
Belvidere.....	3.57	-0.18	2.20	-2.12	3.05	-0.99	4.14	+0.87	3.38	-0.51	4.85	+0.45	6.13	+0.53	2.88	-2.08	0.14	-3.78	1.54	-2.30	2.45	-1.04	5.16	+1.02	39.49	-10.13
Charlotteburg.....	3.97	-0.39	2.06	-2.60	6.45	+2.51	4.78	+0.85	4.64	-0.16	3.01	-1.25	6.41	+1.53	1.89	-2.86	0.33	-4.35	2.06	-2.35	4.81	+1.08	4.42	+0.03	44.83	-7.96
Culvers Lake.....	3.60	+0.42	1.89	-1.46	2.93	-0.50	4.19	+0.32	3.93	+0.43	3.50	-0.34	4.89	+0.13	1.72	-2.81	0.36	-3.45	1.94	-1.71	2.44	-0.38	3.05	-0.48	34.44	-9.83
Dover.....	4.35	-0.14	2.38	+1.86	3.43	-0.47	3.72	+0.21	2.58	-1.56	3.36	-0.76	7.55	+2.07	2.10	-2.90	0.36	-4.12	2.45	-1.55	4.12	+0.49	5.61	+1.49	42.01	-9.10
Newton.....	4.30	+0.80	2.95	-0.88	5.61	+2.01	4.49	+1.28	3.60	-0.54	3.80	+0.01	6.62	+1.92	2.69	-1.72	0.35	-3.33	1.70	-2.01	.....	.....	3.93	+0.23	.....	.....
Phillipsburg.....	4.08	+0.43	2.50	-1.29	2.36	-1.29	3.19	+0.17	3.85	-0.20	2.16	-1.99	6.27	+1.42	3.40	-1.30	0.33	-3.45	1.69	-1.91	1.72	-1.56	5.01	+1.33	36.56	-9.64
Sussex.....	3.79	+0.18	2.31	-1.23	4.70	+1.03	4.48	+1.23	5.09	-1.18	2.92	-0.81	4.36	-0.16	1.73	-2.59	.....	.....	2.02	-1.33	2.10	-0.96	2.99	-0.75	.....	.....
<i>The Red Sandstone Plain.</i>																										
Bayonne.....	4.68	+0.55	2.64	-1.37	2.90	-1.33	3.35	-0.33	2.50	-1.08	2.43	-1.21	5.37	+0.24	3.18	-1.93	0.20	-3.69	2.39	-1.26	3.04	-0.49	4.28	+0.76	36.96	-11.14
Bergen Point.....	3.86	-0.56	3.57	-0.82	3.82	-0.40	4.35	+0.46	3.18	-0.80	1.92	-2.03	7.26	+1.75	3.27	-1.79	0.23	-4.30	2.33	-1.75	3.47	-0.11	5.83	+1.84	43.09	-8.51
Bloomton.....	3.59	-0.61	2.58	-1.63	2.59	-1.15	3.67	-0.09	2.90	-1.35	3.47	-0.27	5.32	-0.14	2.82	-2.57	0.38	-4.11	2.06	-1.78	3.64	-0.03	4.51	+0.41	37.53	-13.32
Chatham.....	2.87	-1.02	3.04	-0.82	2.87	-1.00	4.40	+0.75	2.66	-1.26	4.28	+0.24	6.33	+1.05	2.50	-2.42	0.53	-3.60	2.18	-1.49	4.33	+0.84	5.64	+1.83	41.63	-6.90
Elizabeth.....	5.40	+1.30	2.77	-1.49	3.97	-0.29	3.93	+0.36	2.98	-0.94	2.32	-1.28	6.55	+1.29	3.32	-1.22	0.26	-3.80	2.10	-1.72	3.02	-0.32	5.58	+1.79	42.20	-6.32
Flemington.....	3.53	+0.06	2.48	-0.91	3.61	0.00	3.10	-0.34	2.44	-1.85	1.81	-2.56	5.61	+0.65	4.11	-0.30	0.29	-3.69	2.05	-1.40	2.27	-1.08	5.65	+1.97	36.95	-9.45
Highwood.....	4.58	+0.51	3.16	-1.37	3.94	-0.21	3.66	+0.27	2.95	-0.89	2.62	-1.16	5.88	+0.51	2.09	-2.98	0.38	-3.78	3.08	-1.45	3.94	+0.31	5.81	+1.65	42.09	-8.59
Jersey City.....	4.83	+0.97	3.66	-0.28	4.55	+0.45	3.72	+0.02	2.48	-0.70	2.30	-1.00	7.02	+2.24	2.80	-1.85	0.19	-3.52	2.36	-1.39	3.09	-0.31	5.13	+1.57	42.13	-3.80
Lambertville.....	2.22	.....	2.05	.....	3.45	.....	2.35	.....	1.62	.....	2.41	.....	4.79	.....	2.45	.....	0.26	.....	1.81	.....	1.50	.....	6.15	.....	31.06	.....
Little Falls.....	4.01	-0.21	2.38	-1.91	2.79	-1.20	3.57	+0.03	3.26	-1.50	2.73	-1.55	6.59	+1.00	1.58	-3.53	0.21	-4.39	2.50	-1.34	4.22	+0.70	5.59	+1.75	39.43	-12.15
Mahwah.....	1.95	-2.42	3.03	-1.25	3.24	-1.15	4.46	+0.99	4.04	-0.60	3.56	-0.90	6.89	+1.52	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newark.....	6.15	+2.39	3.47	-0.21	2.77	-1.16	4.09	+0.36	3.13	-0.91	2.30	-1.33	7.39	+2.66	2.34	-2.90	0.33	-3.52	2.74	-1.03	3.44	-0.06	5.26	+1.46	43.41	-4.25
New Brunswick.....	4.82	+1.01	2.52	-1.17	3.31	-0.60	3.00	-0.79	3.65	-0.26	2.32	-1.45	5.33	+0.28	1.88	-3.21	0.41	+3.44	1.61	-1.98	2.87	-0.72	4.97	+1.22	36.69	-11.11
Paterson.....	3.76	-0.30	2.80	-1.60	3.31	-0.92	3.62	+0.13	2.68	-1.81	2.98	-1.34	4.76	-0.57	1.27	-3.86	0.33	-4.11	2.78	-1.37	3.61	+0.35	5.09	+0.98	36.99	-14.42
Plainfield.....	4.44	+0.55	2.87	-1.04	4.19	+0.38	3.74	-0.16	3.37	-0.46	2.67	-1.46	7.59	+2.19	2.01	-2.86	0.38	-4.07	2.49	-1.16	3.49	-0.10	5.57	+1.68	42.81	-6.51
Pompton Plains.....	3.51	-0.88	3.24	-1.19	3.51	-0.53	4.25	+0.69	3.97	-0.39	3.42	-0.74	6.30	-0.75	2.05	-3.03	0.52	-4.03	2.66	-1.10	4.17	+0.68	5.71	+1.97	43.31	-7.80
Somerville.....	3.61	+0.13	3.20	-0.35	3.55	-0.40	2.74	-0.81	2.79	-1.33	2.71	-1.44	5.67	+0.54	2.47	-2.24	0.54	-3.12	2.05	-1.36	2.61	-0.78	4.97	+1.40	36.91	-9.76
South Orange.....	3.84	-0.30	2.52	-1.50	4.61	+0.80	4.02	+0.53	2.22	-1.24	2.93	-0.63	7.31	+2.19	2.42	-2.97	0.30	-3.79	2.33	-1.48	3.45	+0.08	4.91	+1.08	40.86	-7.23
New York, N. Y.....	3.69	-0.10	3.27	-0.47	4.55	+0.45	2.67	-0.63	1.97	-1.21	1.83	-1.43	5.13	+0.59	2.18	-2.35	0.20	-3.39	1.92	-1.79	2.08	-1.36	4.01	+0.56	33.50	-11.13
<i>The Southern Interior.</i>																										
Bridgeton.....	3.15	-0.59	2.32	-1.78	2.75	-1.72	4.21	+0.78	0.95	-2.98	1.44	-2.33	3.70	-0.73	4.27	-0.47	0.59	-3.22	1.18	-2.35	2.12	-1.14	6.13	+2.26	32.81	-14.27
Burlington.....	3.09	-0.45	4.69	+0.95	2.89	-1.19	3.26	-0.11	1.67	-2.56	2.63	-1.29	6.02	+0.99	2.46	-3.15	0.62	-3.30	2.34	-1.11	1.73	-2.01	6.65	+2.74	38.05	-10.49
Clayton.....	.....	.....	.....	.....	2.70	-1.28	.....	.....	.....	.....	2.30	-1.10	8.54	+4.27	4.11	-1.04	0.21	-3.81	1.35	-2.16	2.13	-1.40	6.51	+2.82	.....	.....
Haddonfield.....	4.12	+0.73	3.85	+0.53	3.16	-0.73	4.05	+0.95	1.20	-2.71	2.29	-1.32	8.57	+4.27	2.88	-1.71	0.41	-3.33	2.06	-1.08	1.99	-1.83	8.03	+4.38	42.61	-1.35
Hammononton.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hightstown.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Inlaystown.....	.....	.....	.....	.....	5.35	+1.16	2.88	-0.62	1.20	-2.69	3.42	-0.56	6.02	+1.00	1.93	-2.93	0.30	-4.01	1.50	-2.57	2.10	-1.56	5.15	+1.58	.....	.....
Indian Mills.....	4.16	+0.46	2.86	-1.10	4.26	+0.16	3.31	+0.18	2.52	-1.52	3.47	-0.32	6.97	+2.91	3.03	-2.14	0.36	-3.81	1.54	-2.04	1.95	-1.65	7.33	+3.24	41.76	-5.63
Lakewood.....	4.23	+0.72	4.94	+1.61	5.94	+2.12	3.70	+0.09	2.49	-1.60	3.37	-0.83	4.92	+0.45	5.84	.....	0.20	.....	1.15	.....	2.61	.....	6.88	.....	46.27	.....
Moorestown.....	3.76	+0.28	2.84	-0.79	2.78	-1.03	3.19	0.00	1.24	-2.79	2.54	-1.26	8.10	+3.52	2.11	-2.63	0.40	-3.36	1.82	-1.82	2.13	-1.29	6.94	+3.36	37.85	-7.81
Northfield.....	2.92	.....	2.22	.....	2.95	.....	3.24	.....	1.75	.....	2.09	.....	5.69	.....	5.32	.....	0.50	.....	2.49	.....	1.69	.....	7.71	.....	38.57	.....
Pleasantville.....	2.52	-0.88	2.72	-0.24	.....	.....	3.48	-0.04	1.58	-1.78	2.23	-1.54	5.92	+1.78	6.44	+1.75	0.38	-3.03	2.37	-1.25	1.77	-1.59	9.01	+5.34	.....	.....
Trenton.....	2.72	-0.45	3.00	-0.19	3.28	-0.76	2.57	-0.72	1.98	-1.54	1.74	-1.75	4.75	-0.02	1.63	-3.74	0.41	-3.18	1.74	-1.67	1.62	-1.81	4.64	+1.48	30.08	-14.35
Tuckerton.....	2.99	-0.67	2.08	-1.71	3.81	-0.58	4.31	+0.52	1.97	-1.46	2.89	-0.88	6.66	+2.76	5.73	-0.05	0.46	-2.90	1.95	-1.72	1.87	-1.59	9.12	+4.84	43.84	-8.44
Vineland.....	4.17	+0.40	2.47	-1.58	2.02	-2.14	3.23	-0.11	1.44	-2.33	1.56	-2.02	4.22	-0.29	5.20	+0.23	0.28	-3.56	1.66	-1.80	1.88	-1.42	6.26	+2.42	34.39	-12.20
Woodbine.....	3.39	-0.26	2.35	-1.70	2.63	-1.45	3.72	+0.14	1.91	-1.99	1.09	-2.41	5.12	+1.10	6.53	+2.23	1.64	-2.39	1.79	-1.80	1.90	-1.25	8.14	+4.24	40.21	-5.54
Philadelphia, Pa.....	3.46	+0.05	3.32	-0.06	2.71	-0.74	3.43	+0.52	0.90	-2.30	3.70	+0.40	7.75	+3.42	2.31	-2.30	0.86	-2.52	1.49	-1.61	1.79	-1.27	7.35	+4.31	39.07	-2.10
<i>The Sea Coast.</i>																										
Asbury Park.....	.....	.....	.....	.....	4.75	+0.45	.....	.....	1.22	-2.49	1.54	-2.26	5.32	+0.07	5.20	+0.06	0.15	-3.09	0.90	-2.88	1.75	-1.52	4.97	-1.33	.....	.....
Atlantic City.....	3.13	-0.27	2.67	-0.60	4.10	-0.37	2.96	-0.03	1.27	-1.73	2.25	-0.78	6.82	+3.04	4.72	+0.42	0.26	-2.79	2.25	-1.05	1.2					

Monthly and Annual Mean Temperatures for the Year 1914, with Departures from the Normal.

STATIONS.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.		Annual.	
	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.
<i>The Highlands and Kittatinny Valley.</i>																										
Avidere.....	29.1	+1.6	23.1	-4.3	35.7	-1.1	48.8	-0.8	63.6	+2.9	68.3	-0.7	71.4	-1.3	71.0	+0.2	61.8	-3.3	56.8	+4.3	41.2	0.0	28.4	-2.4	49.9	-0.4
Charlotteburg.....	26.9	-0.2	20.8	-5.5	32.6	-2.1	46.4	-0.3	60.4	+3.1	64.8	-0.7	68.2	-1.3	69.2	+1.5	60.4	-1.9	55.2	+4.8	39.5	-1.0	28.0	-2.6	47.7	-0.5
Ver. City.....	26.7	+0.1	21.0	-5.2	32.4	-2.5	45.3	-2.0	61.6	+3.0	65.4	-1.8	68.4	-3.0	69.4	+0.2	60.2	-2.4	54.4	+3.7	38.6	-1.7	26.7	-3.4	47.5	-1.3
Waton.....	25.2	-0.5	19.8	-5.9	32.8	-3.0	45.4	-2.2	62.0	+2.7	66.7	-1.0	70.1	-1.8	70.8	+1.0	61.6	-2.0	55.4	+3.7	40.6	+0.8	27.4	-1.9	48.2	-0.8
Phillipsburg.....	29.9	+2.0	24.0	-3.8	36.2	-1.7	49.8	+0.2	64.1	+2.8	69.5	-0.2	72.4	-1.6	73.0	+1.3	63.8	-1.6	57.6	+4.7	42.2	+0.6	28.8	-2.5	50.9	0.0
Essex.....	25.4	-0.7	20.4	-5.8	33.0	-3.4	46.4	-1.9	61.4	+1.5	65.6	-2.0	70.6	-1.1	71.2	+1.6	61.2	.....	54.5	.....	39.6	-0.9	27.8	-2.0	.....	.....
<i>The Red Sandstone Plain.</i>																										
Yonne.....	31.3	+1.2	25.6	-4.9	36.0	-2.0	48.4	-0.6	63.8	+3.5	68.8	-0.9	71.8	-2.6	74.2	+1.3	66.0	-0.8	58.8	+3.5	44.2	+1.2	31.4	-2.0	51.7	-0.3
Wegen Point.....	31.0	+0.8	26.3	-4.1	36.3	-1.5	.....	.....	62.5	+2.8	67.7	-1.1	70.6	-2.8	73.2	+1.5	65.6	-1.1	58.6	+4.3	43.5	+0.5	31.8	-1.2	.....	.....
Winton.....	31.7	+1.6	26.0	-4.4	36.4	-2.0	49.2	-1.6	63.8	+1.6	69.8	-1.4	73.0	-2.5	74.4	+0.9	65.7	-1.3	58.9	+4.2	43.4	-0.2	31.2	-2.3	52.0	-0.6
Wilmington.....	31.7	+2.1	25.0	-5.5	35.7	-1.8	49.6	+0.5	64.2	+4.3	68.7	-0.4	72.2	-1.7	73.4	+1.6	64.8	-0.3	58.7	+4.6	43.0	+0.2	30.4	-1.6	51.4	+0.1
Weywood.....	30.0	+1.1	22.8	-5.9	33.8	-2.4	47.2	-1.3	60.9	+1.2	66.0	-2.3	69.6	-2.9	71.6	+0.4	61.9	-2.3	56.6	+3.9	41.8	-0.5	29.6	-2.8	49.3	-1.2
Wey City.....	31.6	+0.8	26.2	-5.0	36.9	-1.3	48.7	-0.7	65.7	+4.6	70.3	+0.3	73.3	-1.4	75.4	+2.1	67.2	0.0	59.8	+4.2	45.1	+1.5	32.0	-2.0	52.7	+0.3
Wimbertville.....	34.0	.....	27.2	.....	38.5	.....	51.6	.....	63.8	.....	70.8	.....	73.8	.....	75.2	.....	64.8	.....	59.6	.....	45.0	.....	33.9	.....	53.2	.....
Witle Falls.....	31.8	+2.2	26.2	-3.6	37.4	-0.1	48.7	-0.4	66.2	+5.4	69.8	+0.1	72.9	-1.4	74.7	+2.1	67.2	+1.3	59.1	+5.0	44.2	+1.3	32.1	-0.9	52.6	+1.0
Wark.....	28.5	-2.0	23.0	-8.3	33.8	-4.4	46.6	-3.1	61.4	+0.8	67.0	-2.6	71.6	-2.7	72.0	-0.4	64.2	-1.8	58.8	+4.2	43.8	+0.2	30.8	-2.3	50.1	-1.9
Werson.....	31.3	+1.9	26.0	-4.2	37.1	-1.4	49.7	-0.6	65.2	+3.9	69.4	-0.7	72.3	-2.0	74.2	+2.2	66.8	+0.6	59.2	+4.8	44.5	+1.2	31.9	-1.2	52.3	+0.4
Winfield.....	31.1	+1.7	25.0	-5.2	35.8	-0.8	49.0	+0.8	63.4	+3.1	67.8	-1.5	71.3	-2.6	73.0	+0.9	64.2	-1.0	57.7	+4.7	42.7	+0.7	30.4	-1.5	51.0	0.0
Winnerville.....	31.2	+2.0	25.1	-4.9	34.8	-2.1	48.9	+0.2	63.4	+3.3	68.2	-1.0	71.8	-2.1	73.4	+1.5	64.0	-1.3	57.6	+4.2	42.2	0.0	30.5	-1.4	50.9	-0.2
Wirth Orange.....	29.8	+1.1	24.1	-4.9	35.2	-1.6	47.9	-0.4	63.2	+3.2	68.0	-0.8	70.8	-2.3	72.6	+1.9	63.6	-0.5	57.1	+4.2	42.6	+1.0	30.6	-1.4	50.5	0.0
W York, N. Y.....	31.4	+1.2	25.3	-5.4	35.8	-1.7	46.6	-1.5	63.6	+4.3	67.6	-0.9	71.1	-2.4	73.7	+1.5	66.2	-0.3	59.0	+3.4	44.0	0.0	31.5	-2.9	51.3	+0.4
<i>The Southern Interior.</i>																										
Widgeton.....	35.6	+2.6	30.0	-3.9	37.4	-3.7	51.3	-0.5	65.6	+1.7	72.6	-0.8	74.2	-2.9	76.4	+1.3	65.4	-2.8	60.0	+3.3	45.4	+0.5	32.8	-2.8	53.9	-0.7
Wilmington.....	32.6	.....	25.6	.....	35.1	.....	48.6	.....	65.1	.....	70.1	.....	73.0	.....	74.7	.....	65.7	.....	58.8	.....	43.9	.....	30.9	.....	52.1	.....
Winton.....	34.8	+3.9	28.6	-3.1	37.0	-2.8	.....	.....	.....	.....	70.1	-1.3	.....	.....	75.1	+1.6	65.1	-1.6	59.8	+4.7	44.8	+1.4	32.0	-2.0	.....	.....
Widdonfield.....	34.2	+4.2	27.4	-4.1	36.9	-2.3	49.9	-0.9	64.0	+2.3	70.1	-0.6	72.8	-2.7	74.6	+1.7	65.4	-0.6	59.4	+5.7	44.8	+2.2	31.5	-1.8	52.6	+0.3
Wightstown.....	.....	.....	.....	.....	.....	.....	.....	.....	63.2	+2.1	68.8	-0.6	71.3	-2.7	73.4	+1.5	63.8	-2.8	60.4	.....	42.6	-1.0	30.9	-2.7	.....	.....
Wlaystown.....	.....	.....	23.4	-7.5	32.8	-6.9	47.7	-2.9	.....	.....	.....	.....	70.7	-4.5	74.0	+0.9	64.8	-1.9	57.8	+2.9	43.3	-1.0	30.0	-4.6	.....	.....
Wlian Mills.....	34.4	+3.0	28.0	-4.1	35.8	-4.0	49.6	-0.7	63.8	+1.8	69.5	-1.5	71.6	-3.5	74.4	+1.3	64.3	-1.8	58.8	+4.4	43.8	+0.4	31.6	-2.4	52.1	-0.6
Wkewood.....	33.1	+1.7	27.0	-4.7	34.2	-4.4	48.2	-0.7	62.0	+1.8	67.4	-0.9	71.0	-2.1	72.6	.....	62.2	.....	56.7	.....	42.5	.....	31.4	.....	50.7	.....
Worestown.....	35.6	+5.5	29.0	-2.0	36.8	-2.0	51.2	+1.2	64.2	+3.1	69.4	-0.8	71.9	-2.9	74.3	+1.8	65.0	-1.0	60.3	+6.1	46.0	+3.0	32.2	-1.1	53.0	+0.9
Winton.....	32.2	+1.7	25.6	-5.1	35.6	-3.5	48.5	-1.3	64.1	+3.0	69.4	-0.1	72.0	-2.5	74.4	+1.4	65.2	-1.7	59.0	+3.4	43.5	-0.9	30.6	-3.8	51.7	-0.8
Wckerton.....	34.0	+2.3	28.8	-3.3	34.1	-4.9	47.8	-0.1	62.0	+2.3	68.6	-0.4	72.0	-2.1	74.3	+2.1	64.3	-1.7	58.4	+3.6	44.4	+0.4	33.4	-1.1	51.8	-0.3
Weland.....	35.0	+3.0	28.7	-3.8	36.5	-3.8	50.4	-0.3	65.1	+2.9	71.0	-0.6	73.7	-2.7	75.2	+1.6	64.4	-2.5	59.2	+3.8	45.4	+1.5	32.8	-1.6	53.1	-0.2
Wodbine.....	36.2	+3.8	30.2	-2.4	36.8	-3.3	49.4	-0.1	63.4	+3.0	67.4	-1.6	69.5	-4.4	72.2	0.0	60.9	-5.4	55.1	-0.5	42.4	-1.6	34.4	-0.6	51.5	-1.1
WPhiladelphia, Pa.....	35.4	+3.6	29.0	-3.8	38.8	-1.2	51.0	+0.2	66.8	+4.6	72.0	+0.8	74.0	-1.8	76.2	+2.4	67.2	-0.2	61.2	+4.9	46.2	+1.3	33.3	-2.4	54.3	+0.7
<i>The Sea Coast.</i>																										
Wbury Park.....	34.2	+2.8	30.2	-1.7	33.8	-4.5	46.4	-1.7	61.4	+2.7	67.4	-0.8	70.0	-2.9	71.8	-0.1	64.6	-2.3	58.2	+2.6	46.0	+1.8	33.4	-1.1	51.4	-0.5
Wlantic City.....	35.6	+3.1	30.2	-2.8	35.0	-3.8	47.0	-0.6	61.0	+3.5	68.3	+1.5	70.6	-1.9	73.6	+1.0	65.3	-2.3	59.8	+2.4	46.0	+0.5	34.4	-2.0	52.2	-0.2
Wpe May.....	36.4	+2.3	31.5	-2.6	36.4	-4.4	48.5	+0.1	62.8	+4.2	68.3	+0.6	71.6	-1.8	74.1	+0.7	65.5	-3.5	61.5	+1.9	47.3	-0.1	34.6	-3.4	53.2	-0.4
Wng Branch.....	31.6	.....	25.6	.....	33.2	.....	45.6	.....	60.2	.....	66.2	.....	70.1	.....	72.4	.....	64.1	.....	57.8	.....	43.9	.....	31.3	.....	50.2	.....

Letters of alphabet denote number of days missing.

Monthly Maximum Temperatures for the Year 1914, with Dates.

STATIONS.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.	
	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.
<i>The Highlands and Kittatinny Valley.</i>																								
Belvidere.....	56	28	53	4	74	27	85	19	95	27	94	25	95	27	90	9	90	22	84	11	74	1	59	3
Charlotteburg.....	54	30	48	4	70	27	81	19	91	27	92	24	91	23	92	19	96	22	82	11	69	1	61	1
Dover.....	53	30	50	4	70	27	82	19	94	27	92	24	88	12	90	9	91	22	82	11	68	1	60	3
Newton.....	52	30	48	27	70	27	82	19	94	27	92	24	92	23	90	16	91	23	79	11	66	4	57	3
Phillipsburg.....	56	28	57	4	71	27	84	19	94	126	95	24	93	23	96	9	95	23	84	11	69	1	62	3
Sussex.....	52	28	49	27	71	27	82	19	95	27	92	24	90	12	93	20	.....	.....	85	11	70	1	60	3
<i>The Red Sandstone Plain.</i>																								
Bayonne.....	57	30	54	4	73	27	83	19	95	27	94	25	94	123	96	19	96	22	83	11	76	4	65	3
Bergen Point.....	57	128	50	3	73	27	82	19	95	27	92	12	92	23	93	19	94	22	84	11	76	4	65	3
Boonton.....	57	28	53	4	72	27	82	19	95	27	93	25	92	123	95	19	96	22	86	10	79	4	64	3
Elizabeth.....	60	28	60	4	75	27	84	19	98	27	98	125	96	23	98	19	98	121	87	10	79	4	66	3
Flemington.....	57	28	53	4	73	27	81	19	93	126	97	25	94	23	98	19	99	22	88	11	77	4	63	3
Highwood.....	58	30	53	4	71	27	82	19	93	27	91	25	89	17	91	9	92	22	83	11	76	4	63	3
Jersey City.....	58	30	54	4	73	27	83	19	97	27	95	25	95	23	95	19	94	2	83	11	76	4	63	3
Lambertville.....	63	28	57	4	74	27	82	19	94	26	96	124	94	26	97	9	93	2	84	10	77	4	63	3
Little Falls.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	92	2	82	11	74	4	62	3
Newark.....	58	30	56	27	73	27	83	19	96	27	95	25	95	23	98	19	96	21	84	11	76	4	65	3
New Brunswick.....	57	28	53	4	72	27	82	19	95	27	93	25	92	123	95	19	96	22	86	10	79	4	64	3
Paterson.....	60	30	54	4	75	27	85	19	97	27	96	24	92	117	96	19	98	121	85	11	75	4	66	3
Plainfield.....	60	28	56	4	74	27	83	19	95	27	92	12	94	23	94	19	95	22	84	10	78	4	65	3
Somervill.....	59	28	55	4	74	27	82	19	96	27	95	25	95	23	98	19	99	22	87	10	79	4	65	3
South Orange.....	56	30	52	4	71	27	80	19	93	27	91	25	90	23	91	9	90	22	80	11	75	4	63	3
New York, N. Y.....	58	30	52	4	70	27	78	19	91	27	90	25	90	23	95	19	92	22	80	11	73	4	61	3
<i>The Southern Interior.</i>																								
Bridgeton.....	72	30	59	3	75	27	83	19	98	27	98	25	97	23	98	19	94	2	87	10	80	4	65	1
Burlington.....	65	30	56	3	75	27	83	19	98	27	96	12	95	23	96	19	95	12	87	10	75	4	62	3
Clayton.....	66	29	56	13	72	27	.....	.....	.....	.....	98	18	.....	.....	96	19	96	22	88	11	79	4	64	3
Haddonfield.....	68	30	58	3	74	27	82	19	96	27	95	12	94	23	95	19	95	22	87	10	78	4	64	3
Hightstown.....	.....	.....	.....	.....	.....	.....	83	19	97	27	92	18	94	23	95	19	96	121	88	10	76	4	64	3
Imlaystown.....	.....	.....	.....	.....	71	27	84	19	.....	.....	.....	.....	93	23	96	19	99	22	88	10	78	4	65	3
Indian Mills.....	69	30	67	4	75	27	84	19	97	27	96	12	96	23	97	19	98	22	88	10	80	4	66	3
Lakewood.....	67	30	58	3	74	27	84	19	97	27	94	25	92	23	94	19	91	2	84	10	76	4	63	3
Moorestown.....	69	129	62	1	74	27	89	19	97	27	95	12	92	23	94	19	95	23	88	10	78	4	64	3
Trenton.....	61	30	53	4	70	27	80	19	94	27	92	24	93	23	95	19	95	22	84	10	76	4	63	3
Tuckerton.....	73	30	60	3	67	27	80	22	98	27	95	24	91	26	96	19	94	21	87	11	76	4	63	3
Vineland.....	71	30	57	4	73	27	81	29	98	27	97	18	98	23	97	19	96	22	84	11	80	4	64	1
Woodbine.....	68	30	57	4	71	27	79	19	95	27	95	12	93	23	95	19	92	2	82	10	76	4	66	3
Philadelphi, Pa.....	67	30	56	3	72	27	77	22	94	27	94	25	96	22	94	19	93	21	85	10	76	4	63	3
<i>The Sea Coast.</i>																								
Asbury Park.....	66	30	55	4	52	17	76	19	91	26	93	12	94	23	88	19	92	2	79	11	77	4	59	3
Atlantic City.....	64	28	57	4	54	17	66	17	90	28	93	12	88	18	92	24	86	22	75	11	70	2	60	3
Cape May.....	64	28	56	4	58	17	69	22	91	27	95	12	93	18	94	24	87	7	82	11	74	4	55	2
Long Branch.....	66	30	56	4	71	27	85	19	95	26	95	25	94	23	93	24	96	2	87	11	79	4	60	3

† On other dates also.

Letters of alphabet denote number of days missing.

ERRATA FOR 1914.

JANUARY.—Philadelphia, Pa., number of days with .01 inch or more precipitation, 9, should read 10.

FEBRUARY.—New York, N. Y., total snowfall 17.4 inches, should read 14.1 inches; Cape May, number of days with .01 inch or more precipitation 10, should read 11.

MARCH.—Moorestown, total snowfall 32.8 inches, should read 22.8 inches.

MAY.—Jersey City, departure of mean temperature from normal +4.0°, should read +4.6°.

JULY.—Miscellaneous phenomena, second line, second word, seven, should read six; Philadelphia, Pa., mean temperature and departure from normal 74.2° and -1.6°, should read 74.0° and -1.8°; Asbury Park, departure of precipitation from normal -0.07 inch, should read +0.07 inch; Bayonne, departure of precipitation from normal -0.24 inch, should read +0.24 inch; Flemington, mean minimum temperature 62.8°, should read 62.6°; Highwood, number of days with .01 inch or more precipitation 13, should read 15; Lakewood, mean temperature and departure from normal 72.0° and -1.1°, should read 71.1° and -2.1°; Little Falls, number of days with .01 inch or more precipitation 15, should read 14; and total precipitation and departure from normal 6.59 inches and +1.00 inch, should read 6.56 inches and +0.97 inch; Sussex, departure of precipitation from normal -1.16 inches, should read -0.16 inch; Tuckerton, greatest daily range 38°, should read 36°; Woodbine, mean temperature and departure from normal 69.6° and

-4.3°, should read 69.5° and -4.4°; and the mean maximum temperature 81.9°, should read 81.8°.

SEPTEMBER.—New York, N. Y., mean temperature 66.5°, should read 66.2°; Hightstown, number of days with .01 inch or more precipitation 1, should read 2; and number of partly-cloudy days 2, should read 1; Woodbine, greatest precipitation in 24 hours 0.55 inch, should read 0.86 inch.

OCTOBER.—Bergen Point, mean maximum temperature 66.9°, should read 67.9°; Imlaytown, mean temperature and departure from normal 58.0° and +3.1°, should read 57.8° and +2.9°; date of highest temperature 19, should read 10; maximum temperature on the 9th 88°, should read 80°; and mean maximum temperature 70.6°, should read 70.4°; Long Branch, mean minimum temperature 97.9°, should read 49.9°.

NOVEMBER.—General Summary, next to the last line, 29, should read 20; Atlantic City, prevailing wind direction sw, should read nw; Bayonne, prevailing wind direction s, should read w; Burlington, number of days with .01 inch or more precipitation 4, should read 5; Cape May, prevailing wind direction e, should read sw; Clayton, number of days with .01 inch or more precipitation 5, should read 6; Moorestown, lowest temperature 14°, should read 18°; Northfield, prevailing wind direction w, should be blank; Trenton, number of cloudy days 8, should read 7.

DECEMBER.—New York, N. Y., highest temperature 66°, should read 61°; Cape May, minimum temperature on the 20th 31°, should read 32°.

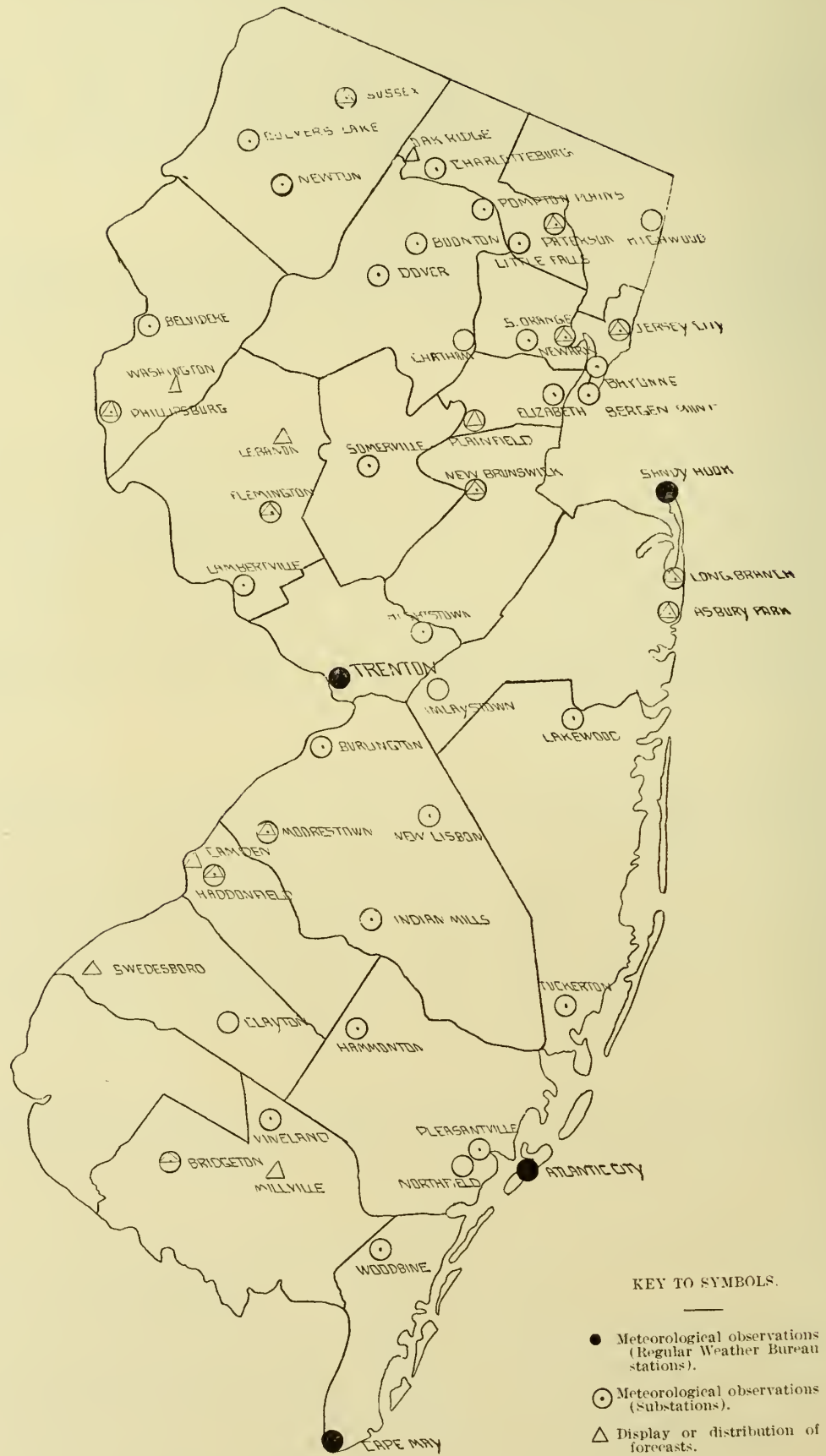
Monthly Minimum Temperatures for the Year 1914, with Dates.

STATIONS.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.	
	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.
<i>The Highlands and Kittatinny Valley.</i>																								
Calders.....	-5	14	-5	26	10	13	22	4	32	1	41	6	50	20	53	26	32	29	27	28	15	24	-2	27
Clintonburg.....	-10	14	-10	16	3	13	16	1	33	2	38	†3	40	20	46	16	24	29	28	28	12	29	-9	27
Wyers Lake.....	-18	14	-17	12	1	12	15	4	30	1	37	20	46	20	42	26	29	29	24	27	7	24	-12	27
et.....			-6	†12	8	13	19	4	33	1	41	6	46	20	52	†14	29	29	27	†27	12	24	-5	27
Clinton.....	-9	14	-7	†12	8	†12	20	4	34	1	42	6	50	20	52	†25	30	29	27	28	10	24	-6	27
Phillipsburg.....	-5	14	-3	13	14	†2	25	†4	38	1	43	6	51	20	54	27	33	29	29	28	19	24	-2	27
Sex.....	-12	14	-12	25	6	13	20	4	35	1	43	5	46	20	49	25			27	28	6	24	-7	27
<i>The Red Sandstone Plain.</i>																								
Donne.....	-4	14	-2	13	15	21	26	4	38	1	49	20	56	†7	57	†1	38	29	30	28	21	24	3	27
Gen Point.....	-4	14	-1	†12	15	21	28	6	40	†1	41	17	54	20	57	1	40	29	28	28	19	24	4	27
nton.....															46	26	24	29	23	28	14	24	5	26
abeth.....	-4	14	-7	25	12	13	22	4	35	1	41	6	52	†1	55	†1	33	29	25	28	17	24	3	27
ington.....	-4	14	-7	16	9	13	24	6	34	1	44	6	52	†1	54	†1	34	29	28	28	19	24	-5	27
hwood.....	-5	14	-9	25	8	13	21	6	30	1	40	6	48	20	53	26	30	29	25	28	17	24	0	27
ey City.....	-3	14	-1	†12	16	21	27	4	40	1	50	20	57	7	†26	40	29	31	28	22	24	5	†26	27
bertville.....	-3	14	-4	26	13	†13	25	6	36	1	45	6	55	†1	57	†1	40	29	31	28	22	24	2	27
<i>The Middle Section.</i>																								
le Falls.....																	31	†28	27	28	19	24	1	27
ark.....	-5	14	-2	†12	12	2	26		39		48	5	56	†7	58	†1	40	29	31	28	20	24	3	27
Brunswick.....	-4	14	-2	†13	8	13	22	4	32	1	44	6	52	†1	53	29	38	†28	28	28	18	24	2	27
erson.....	-4	14	-2	†12	15	21	26	†4	37	1	48	†6	54	†20	56	26	36	29	29	28	20	24	3	27
anfield.....	-4	14	-5	25	10	13	22	4	36	1	46	3	51	20	54	1	35	29	26	28	16	24	2	27
erville.....	-4	14	-7	25	11	†11	21	4	32	2	41	17	48	1	52	27	30	29	26	28	15	24	2	26
th Orange.....	-4	†13	-2	†12	13	21	25	4	38	1	47	17	54	1	57	14	34	29	28	28	18	24	4	27
York, N. Y.....	-5	14	-2	12	14	21	26	4	40	1	48	20	54	7	59	1	42	28	31	28	22	23	4	26
<i>The Southern Interior.</i>																								
lgeton.....	0	14	0	25	5	21	25	†4	35	1	46	†6	55	20	56	26	38	†28	28	28	17	24	2	27
lington.....	-1	†14	-3	†25	14	†21	25	†6	37	1	41	4	54	20	58	†1	38	29	29	28	18	24	4	26
nton.....	-1	14	-1	25	7	21	25				41	6	54	30	55	26	35	28	30	29	20	18	2	26
ldonfield.....	-3	14	-2	25	11	21	23	6	36	1	44	6	53	20	56	26	35	29	28	28	15	24	3	27
htstown.....						†13	20		36	†1	42	6	51	28	55	†1	32	29	26	28	16	24	1	27
aystown.....				25	7		20	4	33	1	44	17	50	20	54	†1	35	†28	23	28	12	24	0	26
ian Mills.....	-3	14	-7	25	0	21	18	6	33	2	38	17	49	20	54	†14	34	29	21	28	9	24	-3	27
ewood.....	-4	14	-3	25	6	13	21	4	33	2	40	17	49	1	53	27	35	†28	22	28	14	24	1	27
restown.....	-3	14	-6	25	9	21	23	†4	35	†1	44	6	53	†6	57	†1	37	29	29	28	18	24	3	†26
nton.....	-4	14	-1	13	15	2	27	4	39	1	49	17	56	30	58	27	39	29	31	28	22	24	4	27
kerton.....	-3	14	-6	25	0	21	19	6	31	1	39	17	49	20	56	†1	34	29	22	28	10	24	2	27
eland.....	-1	14	-1	25	-6	21	25	4	36	†1	44	17	51	20	55	25	37	29	26	28	15	24	2	27
odbine.....	-2	14	-1	25	-4	21	21	4	34	2	35	†17	46	20	50	26	30	29	19	28	7	24	7	†26
Philadelphia, Pa.....	0	14	3	13	16	2	30	4	43	1	51	20	58	31	61	1	44	29	33	28	26	21	8	27
<i>The Sea Coast.</i>																								
ury Park.....	-6	14	1	25	9	21	25	4	38	1	50	†3	53	31	60	†18	40	28	29	28	20	24	6	26
antie City.....	-1	14	3	25	13	21	27	4	38	1	50	6	58	31	61	1	42	28	32	28	22	24	8	26
de May.....	3	14	5	25	12	21	28	4	43	2	50	6	56	30	58	26	42	29	37	27	24	24	10	26
ng Branch.....	-6	14	-2	†12	10	21	25	4	36	1	46	6	54	20	58	†1	38	28	27	28	18	24	5	26

† On other dates also.

Letters of alphabet denote number of days missing.

OBSERVATION AND FORECAST DISPLAY STATIONS.



TOTAL PRECIPITATION FOR THE YEAR 1911



REGULAR, SPECIAL, AND COOPERATIVE STATIONS AND OBSERVERS.*

Stations.	Observers.	Stations.	Observers.	Stations.	Observers.
Asbury Park.....	H. E. Denegar.	Haddonfield.....	Prof. Chas. F. Richardson.	Paterson.....	Heber A. Probert.
Atlantic City.....	U. S. Weather Bureau.	Hammoncton.....	H. J. Rolfe.	Phillipsburg.....	D. Wilson Smith.
Bayonne.....	Erskine R. Eadie.	Hightstown.....	Chas. W. Dunbar.	Plainfield.....	John Neagle.
Belvidere.....	Samuel J. Hixson.	Highwood.....	Chas. J. Bates.	Pleasantville.....	Lincoln Van Gilder.
Bergen Point.....	Wm. H. Mitchell, D. D. S.	Imlaystown.....	H. E. Bullock.	Pompton Plains.....	M. S. Taylor.
Boonton.....	J. W. Demmers.	Indian Mills.....	James M. Armstrong.	Sandy Hook.....	U. S. Weather Bureau.
Bridgeton.....	Henry A. Jorden.	Jersey City.....	Samuel K. Pearson, Jr.	Somerville.....	A. A. McDonald.
Burlington.....	D. S. B. McCoy.	Lakewood.....	Richard W. Hofman.	South Orange.....	Wm. J. Chandler, M. D.
Cape May.....	U. S. Weather Bureau.	Lambertville.....	Samuel W. Cochran.	Sussex.....	George Dymock.
Charlotteburg.....	George S. Briggs.	Little Falls.....	Montclair Water Co.	Trenton.....	U. S. Weather Bureau.
Chatham.....	Miss M. A. Butler.	Long Branch.....	Wm. D. Martin, Jr.	Tuckerton.....	Frank R. Austin.
Clayton.....	George L. Wilson.	Moorestown.....	Geo. L. Gillingham.	Vineland.....	E. V. C. Hendricks.
Culvers Lake.....	Brice E. Riker.	Newark.....	Prof. William Wiener.	Woodbine.....	Baron de Hirsch Agric'l School.
Dover.....	Wm. C. Harris.	New Brunswick.....	N. J. Experiment Station.		CRANBERRY MARSH STATION.
Elizabeth.....	L. B. Bonnett.	Newton.....	Lloyd A. Voorhees.		
Flemington.....	Hiram E. Deats.	Northfield.....	Wm. L. Flick.	New Lisbon.....	Ivins Hornor.

* At the end of the year, 1914.

FORECAST DISPLAY STATIONS AND DISTRIBUTING CENTERS.

WEATHER AND TEMPERATURE FLAGS.		STORM WARNING DISPLAY STATIONS.	
Stations	Displaymen		
Asbury Park.....	Asbury Park Trust Co.	Atlantic City	Great Egg
do.....	Asbury Park Publicity Bureau	Avalon	Island Heights
Atlantic City.....	Manager, Preston Building	Bivalve	Keyport
do. (in summer only).....	Seaside Yacht Club	Cape May Point	Little Egg
Bridgeton.....	Henry A. Jorden		
Island Heights (in summer only).....	Island Heights Yacht Club		
Jersey City.....	Union Trust Co. of New Jersey		
Long Branch (cold wave warnings).....	William D. Martin, jr.		
Newark.....	Central High School		
do.....	State Normal School		
New Brunswick.....	National Bank of New Jersey		
Plainfield.....	John Neagle		
Princeton.....	First National Bank		
Trenton (cold wave warnings).....	U. S. Weather Bureau		
FORECAST DISTRIBUTING CENTERS.		BY TELEPHONE.	
Figures following the name of distributing center indicate the number of forecast cards distributed daily, by mail, to points in New Jersey.		The daily forecasts are available after 10:30 a. m. at the following places to over 100,000 patrons of the telephone companies. "B" and "I" indicate, respectively, Bell and Independent telephone systems.	
Atlantic City—207.....	U. S. Weather Bureau	Allentown.....	B Long Branch and Vicinity.....
Cape May—53.....	do.	Anglesea.....	B Lower Bank.....
Long Branch—230.....	William D. Martin, jr.	Atlantic City.....	B-1 Lumberton.....
Newark—176.....	Prof. Wm. Wiener	Avalon.....	B Manahawkin.....
New York, N. Y.—399.....	U. S. Weather Bureau	Bargaintown.....	B Marlton.....
Oak Ridge—R. F. D. Service—85.....	Postmaster	Barnegat.....	B-1 Masonville.....
Philadelphia, Pa.—173.....	U. S. Weather Bureau	Barnegat City.....	B Mays Landing.....
Plainfield—105.....	John Neagle	Beech Haven.....	B Medford.....
Sandy Hook—17.....	U. S. Weather Bureau	Belle Mead.....	B Merchantville.....
Trenton—315.....	do.	Beverly.....	B-1 Millville.....
Washington—R. F. D. Service—75.....	Postmaster	Bordentown.....	B-1 Monmouth Junction.....
		Bridgeton.....	B-1 Moorestown.....
		Burlington.....	B-1 Mount Holly.....
		Califon.....	B-1 Mullica Hill.....
		Camden.....	B-1 Newark.....
		Cape May City.....	B-1 New Egypt.....
		Cape May Court House.....	B-1 Ocean City.....
		Cedarville.....	B Passaic.....
		Chester.....	B-1 Paterson.....
		Chesterfield.....	B-1 Pemberton.....
		Clinton.....	B Pennington.....
		Collingswood.....	B Pennsgrove.....
		Cologne.....	B-1 Perth Amboy.....
		Columbus.....	B-1 Pitman.....
		Cranbury.....	B Plainfield.....
		Dennisville.....	B Plainsboro.....
		Egg Harbor City.....	B-1 Pleasantville.....
		Elmer.....	B-1 Port Norris.....
		Englishtown.....	B-1 Port Republic.....
		Erma.....	B-1 Princeton.....
		Fieldsboro.....	B-1 Rancocas.....
		Flemington.....	B-1 Riverside.....
		Forked River.....	B-1 Riverton.....
		Frenchtown.....	B-1 Salem.....
		Germania.....	B-1 Sea Isle City.....
		Glassboro.....	B-1 Smithville.....
		Gloucester.....	B-1 Somers Point.....
		Haddonfield.....	B-1 Surf City.....
		Hainesport.....	B-1 Sussex.....
		Hammoncton.....	B-1 Swedesboro.....
		Hampton.....	B-1 Trenton.....
		Harrison.....	B-1 Tuckahoe.....
		High Bridge.....	B-1 Tuckerton.....
		Hightstown.....	B-1 Union Hill.....
		Holly Beach.....	B-1 Vincentown.....
		Hopewell.....	B-1 Vineland.....
		Imlaystown.....	B-1 Westville.....
		Jersey City.....	B-1 Wildwood.....
		Jobtown.....	B-1 Williamstown.....
		Lambertville.....	B-1 Woodbine.....
		Lawrenceville.....	B-1 Woodbury.....
		Lebanon.....	B-1 Woodstown.....
		Linwood.....	B-1

EMERGENCY WARNINGS.

Emergency warnings, when necessary, are telegraphed to 100 postmasters.

SPECIAL WARNINGS.

Place	Distributor
Atlantic City.....	U. S. Weather Bureau
Bordentown.....	Bordentown Tel. & Tel. Co.
Bridgeton.....	Henry A. Jorden
Cape May City.....	U. S. Weather Bureau
Freehold.....	J. A. Yard
Jersey City.....	Union Trust Co.
Long Branch.....	William D. Martin
Millville.....	Inter-State Tel. & Tel. Co.
Mount Holly.....	do.
Newark.....	Prof. William Wiener
Paterson.....	Paterson, Passaic & Suburban Tel. Co.
Plainfield.....	John Neagle
Salem.....	Inter-State Tel. & Tel. Co.
Swedesboro.....	Peoples Rural Telephone Co.
Trenton.....	U. S. Weather Bureau

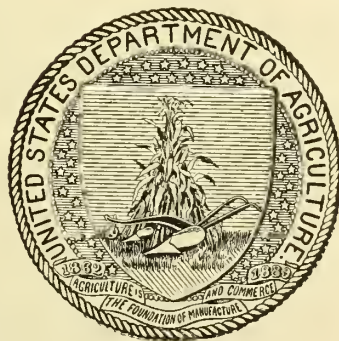
U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU
CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

JANUARY, 1915

BY
G. HAROLD NOYES
SECTION DIRECTOR



TRENTON, N. J.
WEATHER BUREAU OFFICE
FEBRUARY 24, 1915.

Departure of the Mean Temperature from the Normal, January, 1915.



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

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GENERAL SUMMARY.

Not in over 20 years has there been so much precipitation in the mid-winter month as occurred in January of this year, and, with the temperature averaging above freezing in all portions of the State, except the northern highlands, most of it was in the form of rain. All sections of the State were above normal in moisture, the northern margin being slightly less than an inch excess, and from that to considerably more than 3 inches excess in south-central districts. The only consecutive days on which precipitation did not occur were from the 8th to the 11th, and from the 26th to the 30th; on the other hand, in nearly all sections, precipitation occurred almost daily from the 17th to the 25th. A typical cyclonic storm occurred on the 12th-13th, during which not less than an inch of precipitation occurred, bringing thence to over 3 inches. This rain was driven by a northeast gale that reached hurricane force along the northeastern shore.

Temperatures in January in this State take a wide average range; the mean in 1890 was 41.3°, and in 1893, 21.6°, thus showing the extreme severity that has occurred, as well as the coldest condition. The approximate normal being 2° under freezing, when the month averages slightly above the freezing point, as was the case in January of this year, the impression is naturally prevalent that unusually mild weather has occurred, whereas actually temperatures averaged 3.5° above normal. The days of subnormal heat were, 1st to 4th, 21st, 22d, 29th to 31st. On other days temperatures ranged from normal to more than 20° above normal on the 18th.

With temperatures above freezing, as well as with excessive snowfall, practically all ice melted from lakes and streams, and the prospect of any further ice harvest this season does not appear favorable.

The Delaware River at Trenton was higher than for several months, averaging 4.4 feet. The highest stage was 7.4 feet on the 13th.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 39 stations, was 33.5°, which was 3.5° above normal. The northern highlands averaged 5° cooler than the coast stations. The highest temperature was 61° at Lambertville on the 19th, and the lowest was 5° below zero at Culvers Lake on the 30th. Each of the four divisions of the State averaged approximately 3.5° above normal. The month averaged 2° warmer than December; similar inversions have occurred but three times previously since 1885. January has averaged above freezing eleven times in 31 years.

PRECIPITATION.

The average precipitation of the State, as deduced from observations of 43 stations, was 6.55 inches, which was 2.74 inches above normal. The greatest monthly amount was 8.92 inches at Lakewood, and the least, 4.40 inches at Cape May. The average snowfall was 3.4 inches, the greatest amount being 11.7 inches at Culvers Lake. This depth of snow was some 6 inches less than the usual monthly amount. The average number of days on which 0.01 inch or more precipitation occurred was 12, which was 2 above normal. The greatest precipitation in any twenty-four consecutive hours was 3.62 inches at Newark on the 12th-13th.

WIND.

The prevailing wind direction was from the northwest, and about 13 miles per hour, which was approximately the normal velocity. The highest velocity for 5 minutes was 85 miles per hour from the northeast on the 12th, at Long Branch. Other dates on which the force of the wind was remarked, were the 8th and 13th.

SUNSHINE AND CLOUDINESS.

The average number of clear days during the month was 11; partly cloudy, 6; and cloudy, 14. The average amount of sunshine was approximately 48% of the possible, which was about normal. The greatest proportion of cloudiness occurred along the coast.

MISCELLANEOUS PHENOMENA.

Atmospheric pressure, reduced to sea level, averaged 30.11 inches, which was normal. The average relative humidity varied slightly above and below normal. The principal dates of dense fog were the 6th, 7th, 14th, and 17th to 19th. Sleet occurred on the 6th, 24th, 25th, and 31st. Solar halos were observed on the 3d, 14th, and 16th, and lunar halos on the 3d, 25th, 26th, and 30th.

COMPARATIVE DATA FOR JANUARY.

Year.	Temperature.			Precipitation.		
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.
1885.....	30.8	67	0	4.08	5.41	3.33
1886.....	27.3	60	-10	4.47	5.59	3.08
1887.....	28.4	67	-6	3.86	6.65	2.00
1888.....	25.4	59	-12	4.77	6.74	2.80
1889.....	36.2	60	8	5.68	8.78	3.84
1890.....	41.3	78	12	2.29	3.22	1.05
1891.....	34.2	59	10	6.57	10.55	4.41
1892.....	29.9	67	-6	5.13	7.05	2.50
1893.....	21.6	54	-21	3.04	4.56	1.87
1894.....	34.2	61	-4	2.34	3.80	1.18
1895.....	28.1	64	-4	4.66	5.80	2.48
1896.....	28.6	61	-7	1.66	2.81	0.68
1897.....	29.0	64	-6	2.80	4.21	1.70
1898.....	32.6	64	-10	4.20	5.90	2.79
1899.....	30.1	60	-21	4.01	5.73	2.40
1900.....	32.4	64	-5	3.85	5.50	2.37
1901.....	30.4	63	-6	2.52	4.00	1.35
1902.....	28.4	58	-5	3.28	4.35	2.52
1903.....	30.4	57	-5	3.90	5.04	2.31
1904.....	23.3	58	-34	3.09	4.67	1.34
1905.....	27.0	60	-16	4.18	7.13	2.68
1906.....	36.5	74	-5	2.85	3.86	2.08
1907.....	31.8	71	-19	3.50	5.80	1.93
1908.....	31.8	60	-6	3.74	5.22	2.29
1909.....	33.2	69	-12	3.18	4.13	3.18
1910.....	29.7	54	-15	5.04	6.65	3.66
1911.....	33.5	63	0	3.44	5.34	1.97
1912.....	22.3	58	-32	2.82	4.62	1.73
1913.....	35.9	68	10	3.58	4.71	2.63
1914.....	31.9	73	-18	3.79	6.15	1.95
1915.....	33.5	61	-5	6.55	8.92	4.40

Climatological data for January, 1915.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.							Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation .01 in. or more.	Clear.	Pt. cloudy.	Cloudy.		
The Highlands and Kittatinny Valley.																				
Belvidere.....	Warren.....	289	24	31.4	+3.9	59	19	8	30	25	6.65	+2.90	1.35	5.0	11	14	3	14	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	23	29.5	+2.4	57	19	4	30	32	4.79	+0.43	1.25	.....	10	14	8	9	.....	George S. Briggs.
Culvers Lake.....	Sussex.....	848	14	.....	.....	.....	.....	5	30	.....	5.89	+2.71	1.73	11.7	14	15	4	12	.....	Brice E. Riker.
Dover.....	Morris.....	600	31	29.3	+2.7	56	18	6	30	29	7.75	+3.26	.....	5.5	11	.....	.....	.....	.....	William C. Harris.
Newton.....	Sussex.....	678	35	28.4	+2.7	57	19	6	30	25	7.03	+3.53	1.30	5.6	12	13	2	16	.....	Lloyd A. Voorhees.
Phillipsburg.....	Warren.....	363	33	31.8	+3.9	59	19	9	30	26	5.71	+2.06	2.05	6.5	13	14	3	14	.....	D. Wilson Smith.
Sussex.....	Sussex.....	442	25	29.8	+3.7	59	19	5	30	30	4.57	+0.96	.....	6.0	12	12	4	15	.....	George Dymock.
Means and extremes...				30.0	+3.2	59	19	-5	30	32	6.06	+2.26	2.05	6.7	12	14	4	13	.....	
The Red Sandstone Plain.																				
Bayonne.....	Hudson.....	50	25	33.9	+3.8	59	18	11	30	26	6.58	+2.45	1.52	1.5	11	12	3	16	.....	Erskine R. Eadie.
Bergen Point.....	Hudson.....	37	18	33.8	+3.6	59	18	10	30	26	7.56	+3.14	1.93	2.0	10	.....	.....	.....	.....	William H. Mitchell.
Boonton.....	Morris.....	400	25	31.6	.....	59	19	9	15	30	5.89	+1.69	2.32	3.7	12	15	2	14	.....	J. W. Demmers.
Chatham.....	Morris.....	234	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Miss M. A. Butler.
Elizabeth.....	Union.....	45	36	33.5	+3.4	59	19	10	30	31	6.84	+2.74	2.00	2.0	14	6	10	15	.....	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	27	32.8	+3.2	59	19	10	30	22	5.64	+2.17	1.32	3.4	12	15	2	14	.....	Hiram E. Deats.
Highwood.....	Bergen.....	90	26	32.0	+3.1	58	19	9	30	29	7.46	+3.39	1.75	.....	13	9	8	14	.....	Charles J. Bates.
Jersey City.....	Hudson.....	10	16	34.5	+3.7	56	7	12	30	24	6.98	+3.12	2.90	4.2	15	11	5	15	.....	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	28	36.1	+5.7	61	19	13	30	26	5.56	+1.82	1.31	1.7	11	10	10	11	.....	Samuel W. Cochran.
Little Falls.....	Passaic.....	180	12	32.0	.....	60	19	9	30	29	7.16	+2.94	2.26	.....	13	10	3	18	.....	Montclair Water Co.
Newark.....	Essex.....	159	73	34.1	+4.5	59	18	9	30	28	8.10	+4.34	3.62	3.5	13	10	4	17	.....	Prof. William Wiener.
New Brunswick.....	Middlesex.....	139	62	33.4	+2.9	60	19	10	30	25	6.03	+2.22	1.67	2.0	12	6	13	12	.....	N. J. Experiment Station.
Paterson.....	Passaic.....	80	44	33.8	+4.4	58	19	11	30	26	6.85	+2.79	1.63	5.4	13	8	10	13	.....	Heber A. Probert.
Plainfield.....	Union.....	100	29	33.3	+3.9	59	18	10	30	27	6.90	+3.01	2.80	2.2	13	9	9	13	.....	John Neagle.
Pompton Plains.....	Morris.....	195	13	.....	.....	.....	.....	.....	.....	.....	6.19	+1.80	2.38	.....	8	.....	.....	.....	.....	M. S. Taylor
Somerville.....	Somerset.....	60	33	32.4	+3.2	58	19	9	30	31	6.28	+2.80	2.23	.....	11	12	6	13	.....	A. A. Macdonald.
South Orange.....	Essex.....	200	45	33.0	+4.3	58	19	10	30	24	7.25	+3.11	1.93	5.0	9	13	3	15	.....	Dr. W. J. Chandler.
New York, N. Y.....		365	45	34.1	+3.9	57	19	10	30	23	5.61	+1.82	2.26	4.0	17	10	5	16	.....	U. S. Weather Bureau.
Means and extremes...				33.3	+3.8	61	19	9	15	31	6.70	+2.72	3.62	3.0	12	11	6	14	.....	
The Southern Interior.																				
Bridgeton.....	Cumberland.....	30	34	35.8	+2.8	60	7	14	30	33	6.13	+2.39	1.60	1.0	11	15	2	14	.....	Henry A. Jorden.
Burlington.....	Burlington.....	12	29	33.6	.....	60	18	12	30	26	7.27	+3.73	2.60	1.5	11	15	5	11	.....	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	23	35.1	+4.2	59	16	9	30	33	.....	.....	.....	.....	12	7	12	.....	.....	George L. Wilson.
Haddonfield.....	Camden.....	75	28	35.0	+5.0	66	18	11	30	32	6.52	+3.13	1.46	2.8	14	11	7	13	.....	Prof. Chas. F. Richardson.
Hammonton.....	Atlantic.....	103	18	.....	.....	.....	.....	.....	.....	.....	6.93	+2.98	.....	.....	11	11	6	14	.....	H. J. Rolfe.
Hightstown.....	Mercer.....	140	23	34.1	+3.2	60	19	11	30	29	7.20	+3.51	2.70	2.5	11	14	4	13	.....	Chas. W. Dunbar.
Imlaystown.....	Monmouth.....	185	27	33.2	+1.5	60	19	10	30	34	6.15	+2.70	1.90	5.0	12	13	3	15	.....	H. E. Bullock.
Indian Mills.....	Burlington.....	76	26	34.6	+3.2	60	18	10	30	34	7.46	+3.76	2.31	6.0	13	10	8	13	.....	James M. Armstrong.
Lakewood.....	Ocean.....	54	12	33.2	+1.8	58	18	9	22	33	8.92	+5.41	3.10	.....	12	7	6	18	.....	R. W. Holman.
Moorestown.....	Burlington.....	75	53	35.6	+5.5	60	17	12	30	29	6.15	+2.67	2.21	.....	11	9	9	13	.....	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	8	.....	.....	.....	.....	.....	.....	.....	5.77	.....	1.70	1.6	12	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	17	.....	.....	.....	.....	.....	.....	.....	6.09	+2.69	1.86	.....	12	4	14	13	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	44	34.0	+3.5	60	18	12	30	27	5.15	+1.98	2.23	2.2	15	9	9	13	.....	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	22	34.6	+2.9	60	7	13	5	31	7.37	+3.71	2.04	3.5	12	10	14	7	.....	Frank R. Austin.
Vineland.....	Cumberland.....	87	47	35.8	+3.8	60	6	13	30	33	6.46	+2.69	2.09	.....	11	14	4	13	.....	E. V. C. Hendricks.
Woodbine.....	Cape May.....	43	24	35.8	+3.4	58	16	13	30	31	7.25	+3.60	1.70	.....	12	15	3	13	.....	Baron de Hirsch Agr. Sch.
Philadelphia, Pa.....		117	45	36.6	+4.8	61	18	14	30	23	6.74	+3.33	3.33	2.1	13	11	6	14	.....	U. S. Weather Bureau.
Means and extremes...				34.6	+3.4	60	16	9	12	34	6.72	+3.21	3.10	2.9	12	12	6	13	.....	
The Sea Coast.																				
Asbury Park.....	Monmouth.....	22	26	34.8	+3.4	56	7	10	30	22	6.50	+2.76	1.80	3.0	13	7	3	21	.....	H. E. Denegar.
Atlantic City.....	Atlantic.....	16	42	35.9	+3.4	59	7	15	30	23	5.28	+1.88	1.55	0.3	12	9	9	13	.....	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	31	36.4	+2.3	58	7	16	30	21	4.40	+1.03	1.36	1.2	14	10	8	13	.....	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	8	33.4	.....	58	17	10	30	24	8.72	.....	2.79	2.0	13	9	6	16	.....	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	17	34.6	+4.9	56	19	14	30	20	6.44	+2.34	2.62	0.5	13	9	8	14	.....	U. S. Weather Bureau.
Means and extremes...				35.0	+3.5	59	7	10	30	24	6.27	+2.00	2.79	1.4	13	8	7	16	.....	
For the State.....				33.5	+3.5	61	19	-5	30	34	6.55	+2.74	3.62	3.4	12	11	6	14	.....	

† On other dates also.

‡ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining sections or division means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

Daily precipitation for January, 1915.

Stations.	Day of month.																															Total.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>The Highlands and Kittatinny Valley.</i>																																	
Alvordville.....		.14				.07	1.11					1.35	1.15				.50	.93	.06		T.		.75		.39							.20	6.65
Charlotteburg.....		T.	*			* 1.40						* 1.25					*	*	.82			T.		.37	.25		.05					.65	1.79
Silver Lake.....		.05				.01	.95					.53	1.73		T.		.20	.89	.09	T.	T.		.78	.12	.30		.01	.02	T.			.21	5.89
Overton.....		.10				* 1.34						* 2.74					*	*	1.60				.97		.25							.75	7.75
Wynton.....																																	
Newton.....		.05				.01	1.10					.90	1.30				.35	1.00			.01		1.00		.30		T.	.01			1.00	7.03	
Hillipsburg.....		.05				.02	1.03					.84	1.48				.21	.93	.03		.02		.59	.10	.17		T.	T.				.24	5.71
Assex.....		.05					.77					* 1.37					.28	.80	.05				.51	.15	.22		.02					.35	4.57
<i>The Red Sandstone Plain.</i>																																	
Wayne.....		T.				.03	.73					1.52	1.20				.14	1.39	.01				.42	.20	.34		T.					.60	6.58
Argen Point.....						.01	.72					1.66	1.93					1.50	.02				.47	T.	.59		T.					.52	7.56
Benton II.....		T.	.01			T.	.67					.20	2.32	T.				.39	.96			T.	.36	.70	.23	.05		T.					5.89
Matham II.....		T.				T.	.68					.35											.08	.55	.07	.10	T.	.03	.04				
Elizabeth.....		T.				.04	.73					1.23	2.00		.02		.12	1.50	.07		.01		.33	.29	.35		T.	T.				.15	6.84
Remington.....		.04				.07	.68					.92	1.32		T.		.22	1.17	.06		T.		.51	.32	.21							.12	5.64
Highwood.....		T.				.03	.81					1.75	1.61		.07		.24	1.30	.08		T.		.64	.10	.44		.01	T.	T.			.38	7.46
Reese City.....		.01				.01	.67				T.	.30	2.90		.02			1.38	.03	T.	T.		.64		.36		T.	.01				.65	6.98
Amberville.....		T.				.09	1.17					1.03	.66				.22	1.31			.20		.31	.33	.15							.09	5.56
Little Falls**.....		.02				.04	.84					2.26	.83		T.		.47	.95	.02			.03	.77	T.	.36			.02				.55	7.16
Swark**.....		T.			.02	.76						2.42	1.20		.03		.52	1.47	.05	T.	T.	*	.88	.01	.23		T.	T.				.51	8.10
Sw Brunswick.....		T.				.03	.57					1.13	1.67				.09	1.47	.06		T.		.30	.22	.19							.20	6.03
Sterson.....		.01				.02	.78					1.63	1.42		.01		.20	1.25	.05		T.		.72	.14	.38		T.	T.				.24	6.85
Stainfield**.....		T.				.03	.72					2.10	.97		.02		.80	.74	.02	T.	T.	.05		T.	.20			T.				.63	6.90
Stampton Plains II.....							.93					.18	2.38		.02			.93	.69				.27	.54	.27	T.			T.				6.19
Stermerville.....		.02					.53					1.06	2.23				.33	1.08			.04		.34	.30	.19							.16	6.28
Stuth Orange.....		T.				T.	.76					1.93	1.10				.44	1.30	.10	T.	T.	.88	T.	.24	.24		T.	T.				.50	7.25
Stw York, N. Y.***.....		.01				.07	.21					1.51	.92		.02		.30	.91	.03	.02	.01	.03	.39	.09	.31		T.	.05				.73	5.61
<i>The Southern Interior.</i>																																	
Stidgeton.....				T.		.15	.53					1.00	1.60				.25	1.15		.25			.20	.20	.40							.40	6.13
Stirlington.....		T.				.08	.75					1.13	2.60		T.		.15	1.44	T.		.25		.23	.21	.21							.22	7.27
Stayton.....						.04	.69					.87					.22	1.29	.09				.39	.24	.40							.29	
Staddonfield.....		T.		T.		.11	.72					1.24	1.46		.02		.24	1.17	.10	.01	.27	T.	.39	.18	.23		T.					.38	6.52
Stammonton.....				.05		.56	.53					* 2.00						1.62	.27			.31		.54	.70							.35	6.93
Stghtstown.....		T.				.06	.60					1.16	2.70				.11	1.48	.05		.16		.25	T.	.43							.20	7.20
Stlaytown.....		T.				.10	.70					.60	1.90				.10	1.15	.05		.40		.30	.20	.35		T.		T.			.30	6.15
Stlian Mills.....				.14		.04	.85					.59	2.31				.15	1.48	.04	T.	.33		.24	.48	.56							.25	7.46
Stewood.....		T.		T.		.10	.78					1.10	3.10				.10	1.65	.05	T.	.43		.32	.28	.82		T.	T.				.25	8.92
Storestown.....						.04	.70					.62	2.21				.13	1.33	.13		T.		.31	.16	.31							.15	6.15
Storthfield.....		T.				T.	.73					.90	.78				.13	1.70	.04	.08	.03		.12	.43	.58							.25	5.77
Stasantville.....		T.		.02		.01	.75					1.13	.66				.22	1.86		.23	T.		.15	.45	.35							.26	6.09
Stenton***.....		.01				.04	.24					1.26	1.06				.49	1.00	.02	.04	.14	.01	.26	.05	.08		T.	T.	T.			.45	5.15
Stckerton.....				.05		.05	.80					.70	2.04				.36	1.40			.12		.45	.65	.50							.25	7.37
Steland.....		T.		T.		T.	.68					.81	2.09				.18	1.45		.04	.07	T.	.12	.45	.35							.22	6.46
Stodbine.....						T.	.72					1.00	1.55				.17	1.70	.07	.70	.06		.16	.40	.56							.16	7.25
Stiladelphia, Pa.***.....		T.		T.		.24	.40				T.	2.19	1.28	T.	T.		.51	.92	.05	.19	.03	T.	.25	.01	.25			T.	T.			.42	6.74
<i>The Sea Coast.</i>																																	
Stbury Park**.....		.02					.29					1.80	1.04				.32	1.42	.03	.15	.12	.01	.37	T.	.49		T.					.44	6.50
Stlantic City***.....		T.		T.		.01	.53				T.	1.19	.40				.29	1.37	.04	.05		T.	.21	.63	.31		T.		T.			.25	5.28
Stpe May City***.....		T.				.01	.46					.03	1.12	.45			.23	.86	.02	.12			.11	.60	.26			.01				.12	4.40
Stng Branch**.....		T.				.04	.82					2.79	.97				.33	1.47	.09	.18	.01	T.	.51	.22	.70		T.	T.				.59	8.72
Stndy Hook***.....		T.				.02	.49					1.66	1.21				.33	1.14	.02	.07	.08	T.	.35	.10	.41							.56	6.44

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24 hour period, midnight to midnight.

|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours.

† Incomplete.

§ Rain gage lost in flood.

* Precipitation included in the next following measurement.

**Precipitation for 24 hour period from midnight to midnight.

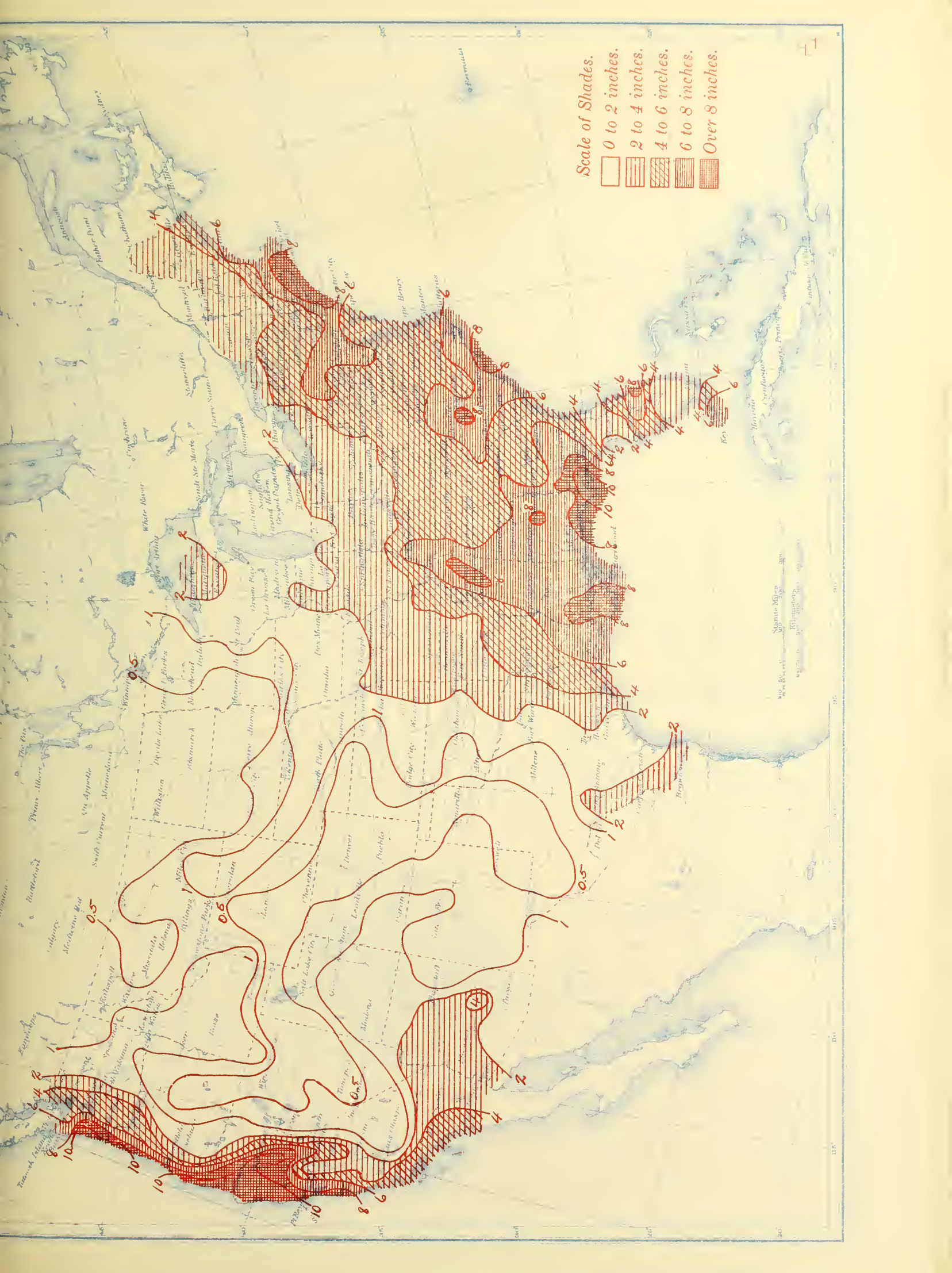
T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.				Moisture.		Sun. shine.
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	Percentage of possible sunshine.
							Miles per hour.	Direction.	Date.			
Atlantic City.....	30.13	30.55	22	28.84	12	8	45	ne.	13	86	79	53
Bury Park.....	30.10	30.54	22									
Pe May.....		30.56	22	28.78	12	9	48	e.	12			
Reese City.....	30.11	30.54	24	29.11	13							
Long Branch.....	30.10	30.53	22	29.05	12	15	85	ne.	12			48
Wark.....	30.12									84	78	45
New York, N. Y.....	30.10	30.52		29.10	13	18	84	s.	7	*76	*71	47
Philadelphia, Pa.....	30.14	30.57	22	28.96	12	12	64	ne.	12	74	78	48
Sandy Hook.....	30.11	30.55	30	29.03	13	16	70	ne.	12	87	84	50
Wilmington.....	30.10	30.53	22	28.98	12	12	70	ne.	12	83	75	40
												51

Daily temperatures for January, 1915.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.		
<i>The Highlands and Kittatinny Valley.</i>																																		
Belvidere.....	Maximum	32	30	30	33	39	43	53	42	36	44	35	38	40	41	47	43	40	56	59	40	41	35	41	42	36	40	35	37	35	26	28	39.3	
	Minimum	11	16	17	14	11	18	39	26	30	31	20	20	25	25	31	26	29	38	39	28	27	18	24	23	23	25	27	30	14	8	15	23.5	
Charlotteburg.....	Maximum	31	29	29	38	38	39	54	46	36	37	36	44	47	39	42	40	43	56	57	39	34	31	40	45	34	35	33	35	33	21	22	38.1	
	Minimum	9	8	15	12	6	18	35	31	26	16	11	28	34	21	23	23	32	39	38	26	25	15	21	21	22	22	21	28	9	4	10	20.9	
Dover.....	Maximum	28	29	25	33	38	42	54	39	32	36	31	40	45	38	44	39	39	56	56	36	32	27	43	43	33	37	31	36	27	22	32	36.9	
	Minimum	11	12	15	13	9	21	33	31	25	17	15	30	29	23	30	26	25	41	33	26	20	16	22	22	25	24	24	27	11	6	12	21.7	
Layton.....	Maximum	30	30	30	30	39	42	57	42	37	38	34	37	43	42	47	43	41	58	59	39	36	29	42	45	36	38	34	36	34	26	28	38.8	
	Minimum	14	18	19	16	13	22	41	29	23	22	31	35	25	32	29	31	39	37	29	28	18	24	23	25	25	28	30	13	9	16	24.9		
Newton.....	Maximum	25	27	30	26	35	40	54	47	37	35	28	36	44	44	40	42	43	42	49	57	39	32	25	40	45	33	35	32	35	20	20	35	36.4
	Minimum	10	14	15	13	11	20	38	30	20	25	11	18	25	24	30	26	27	39	35	26	15	15	21	20	22	23	25	10	10	6	10	20.0	
Phillipsburg.....	Maximum	31	31	29	30	39	42	57	42	37	38	34	37	43	42	47	43	41	58	59	39	36	29	42	45	36	38	34	36	34	26	28	38.8	
	Minimum	14	18	19	16	13	22	41	29	23	22	31	35	25	32	29	31	39	37	29	28	18	24	23	25	25	28	30	13	9	16	24.9		
Sussex.....	Maximum	30	30	27	32	39	37	56	43	35	39	33	37	45	44	44	44	42	53	59	39	32	26	41	41	34	37	32	36	36	26	30	38.0	
	Minimum	6	12	15	11	9	20	35	29	29	19	12	30	32	27	32	26	27	39	37	27	25	6	22	22	23	24	25	27	10	5	8	21.6	
<i>The Red Sandstone Plain.</i>																																		
Bayonne.....	Maximum	32	32	31	32	43	46	56	43	36	37	33	44	43	41	47	47	51	59	59	42	47	31	53	53	37	39	34	39	33	25	32	41.1	
	Minimum	18	20	20	19	17	25	40	32	29	23	27	31	33	27	36	27	29	43	39	31	29	20	27	28	29	27	29	32	16	11	18	26.7	
Bergen Point.....	Maximum	30	31	30	30	43	49	55	53	38	37	35	45	46	41	48	42	51	59	58	42	35	30	52	52	37	38	35	40	33	25	33	41.1	
	Minimum	19	19	19	19	17	30	41	30	28	24	22	31	32	29	36	28	31	44	36	29	20	26	29	27	28	30	30	15	10	17	26.6		
Boonton.....	Maximum	34	30	28	37	39	41	56	48	39	41	34	42	50	42	48	46	40	58	59	42	41	32	40	42	37	40	35	40	35	24	25	40.2	
	Minimum	14	12	18	13	9	20	38	32	27	12	11	30	30	24	33	24	26	38	40	28	28	19	24	25	26	25	25	30	14	9	13	23.1	
Elizabeth.....	Maximum	35	32	32	36	45	40	56	46	38	41	36	42	51	44	51	45	43	58	59	42	37	32	43	52	37	42	35	42	37	27	29	41.5	
	Minimum	15	16	20	18	14	22	39	29	26	19	19	32	36	26	34	26	27	41	42	28	30	19	26	28	28	26	28	33	16	10	17	25.5	
Flemington.....	Maximum	34	35	32	35	41	40	56	43	37	39	34	42	48	48	50	47	40	58	59	41	38	30	41	48	36	40	35	40	35	30	30	40.7	
	Minimum	16	17	20	18	13	22	39	30	26	21	20	32	38	26	30	27	28	38	38	29	30	19	25	26	27	27	18	32	16	10	17	25.0	
Highwood.....	Maximum	37	31	31	32	40	49	55	43	36	36	35	41	45	40	47	42	42	57	58	39	36	30	50	50	35	36	34	36	32	23	32	40.0	
	Minimum	14	14	19	14	11	20	38	29	25	20	18	29	33	25	32	25	29	35	38	30	29	20	26	27	28	25	26	29	14	9	14	24.0	
Jersey City.....	Maximum	31	33	30	32	40	48	56	41	36	35	36	44	47	42	47	42	49	54	54	42	36	29	52	48	37	39	36	40	32	25	32	40.3	
	Minimum	20	22	20	20	22	31	42	33	33	25	25	34	34	29	36	32	36	46	42	32	28	21	28	28	29	28	34	32	17	12	20	28.7	
Lambertville.....	Maximum	35	35	35	37	43	47	50	42	33	43	40	41	48	49	47	48	50	49	59	61	44	43	36	46	45	44	44	43	38	29	35	43.9	
	Minimum	18	20	22	21	17	25	40	32	29	25	23	34	39	30	35	31	34	41	40	33	30	21	29	29	30	29	33	35	18	13	22	28.3	
Little Falls.....	Maximum	31	33	30	33	40	50	55	43	35	36	35	44	49	40	47	43	42	58	60	42	34	30	50	35	38	41	39	41	32	23	30	40.0	
	Minimum	14	16	15	16	13	21	34	33	23	18	20	34	30	25	30	25	28	38	34	30	21	20	30	26	27	27	28	24	14	9	17	23.9	
Newark.....	Maximum	34	32	30	34	43	51	56	46	40	38	35	41	50	43	50	45	47	59	55	42	38	30	52	49	37	39	39	40	36	25	34	41.7	
	Minimum	19	19	18	17	21	29	39	31	30	24	24	32	34	27	30	32	35	42	37	30	24	19	24	27	27	27	30	32	15	9	17	26.5	
New Brunswick.....	Maximum	30	33	32	33	41	40	55	45	37	36	33	45	50	43	47	43	51	58	60	42	36	30	47	52	36	38	35	38	40	28	32	40.8	
	Minimum	18	18	18	18	16	26	40	29	26	22	20	30	35	27	33	28	30	44	38	29	30	18	25	27	25	28	31	32	16	10	17	25.9	
Paterson.....	Maximum	33	31	32	35	43	40	56	46	39	38	33	43	49	41	50	45	42	57	58	42	38	32	45	51	37	41	35	40	35	25	29	40.7	
	Minimum	25	19	20	18	17	25	38	32	30	24	23	31	36	27	35	29	29	41	41	30	30	20	26	28	28	30	33	15	11	17	27.0		
Plainfield.....	Maximum	32	31	29	34	41	42	57	43	37	38	35	44	50	41	48	43	44	59	59	41	36	36	51	51	38	40	35	40	32	25	33	40.8	
	Minimum	17	17	20	19	14	23	39	30	26	20	20	32	35	27	35	26	29	44	38	29	27	20	27	28	27	27	30	32	15	10	17	25.8	
Somerville.....	Maximum	33	35	32	36	41	42	57	46	38	39	34	46	48	42	47	44	44	56	58	40	36	32	48	51	38	40	35	39	37	27	31	41.0	
	Minimum	13	14	19	16	10	19	41	31	21	17	17	31	35	24	34	24	26	41	36	25	27	17	28	27	27	25	26	31	15	9	14	23.9	
South Orange.....	Maximum	30	31	28	31	40	46	55	41	37	35	35	43	49	39	47	41	45	57	58	40	35	29	50	42	37	38	37	40	30	26	32	39.5	
	Minimum	19	19	19	19	18	27	39	32	28	24</																							



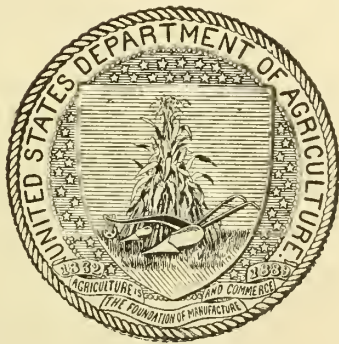
U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU
CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

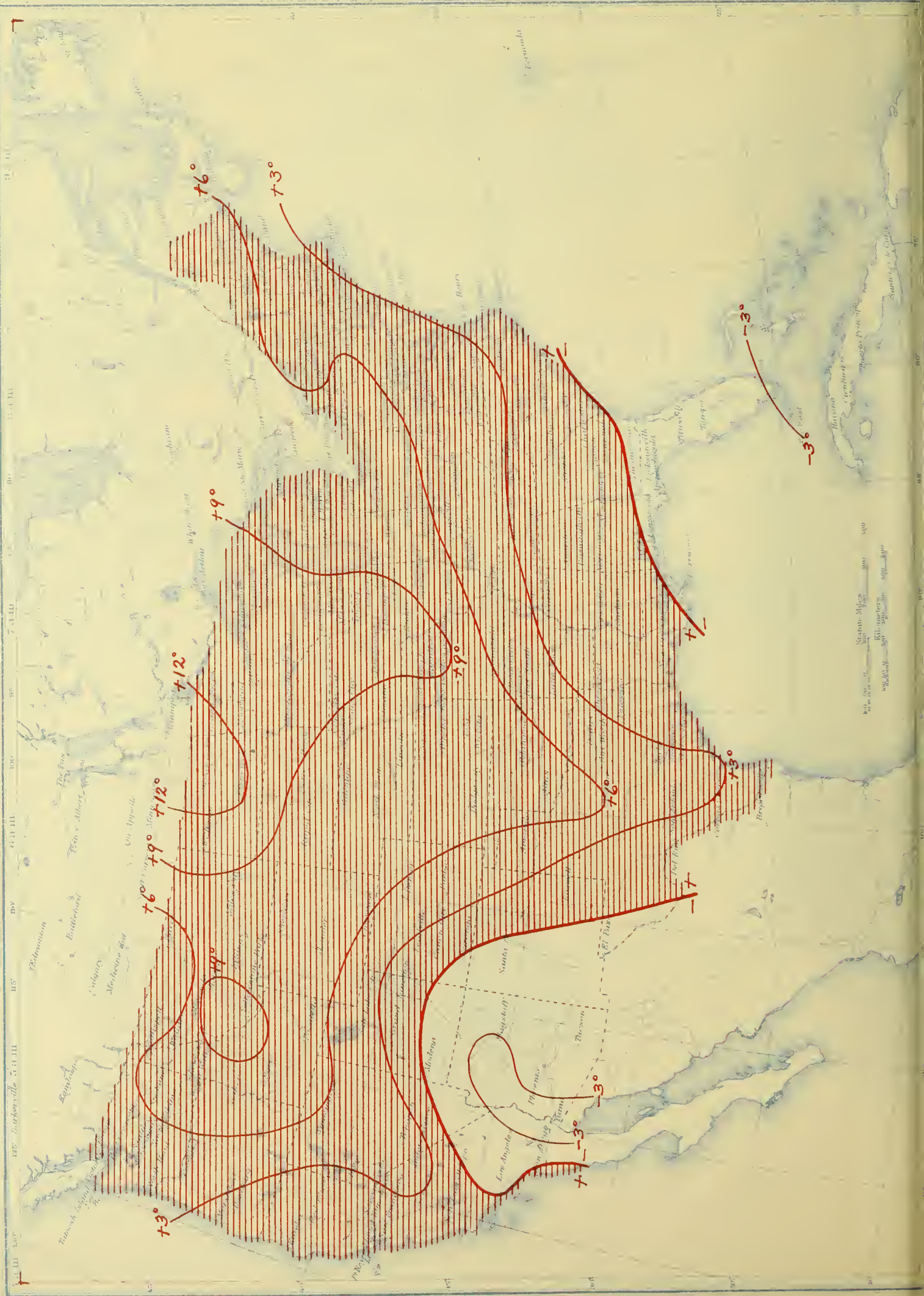
FEBRUARY, 1915.

BY
G. HAROLD NOYES
SECTION DIRECTOR



TRENTON, N. J.
WEATHER BUREAU OFFICE
MARCH 17, 1915.

Departure of the Mean Temperature from the Normal, February, 1915.



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

VOL. XXVIII. TRENTON, N. J., FEBRUARY, 1915. No. 2.

GENERAL SUMMARY.

In the years 1890, 1891, 1909, and 1915, the month of February will be remembered as lacking most of the usual winter characteristics. The average February temperature for the whole State is about 2° below freezing, and when the month passes with more than half the days considerably above freezing, as in February this year, the abnormality is most noticeably marked. Not for 22 years has a February passed without a record of zero temperature in some portion of the State until this year, and the high record of 75° at Indian Mills on the 15th breaks all records except 76° at Beverly on February 18th, 1890.

The days when it was below normal in temperature were the 4th, 8th to 10th, 18th, 27th, and 28th, while on the 15th it was as much as 25° above normal.

The water in streams and ponds remained unfrozen throughout the month. This warm weather pervaded every portion of the State, and the low station average was but a fifth of a degree below freezing, and only 7° lower than the warmest station. Along the southeast coast, temperatures averaged about three and a half degrees above normal, but from that region toward the Southern Interior and Delaware Valley the temperature rose rapidly to a greater degree above normal, the greatest departure being about seven. This temperature naturally precluded the possibility of much snow, which in fact, averaged more than half a foot less than normal.

The precipitation averaged greater than any other February since 1902, and as the usual condition for February is for a considerable fall of snow to occur, this month was probably the wettest rainy, and least snowy, since the commencement of observations. But this large amount of precipitation was confined to four short periods at intervals through the month, so that the weather was unusually open and agreeable. The days of general precipitation were the 1st to 3d, 5th, 6th, 15th, 16th, 24th and 25th. Practically all the snow fell on the 2d and 3d.

The mean daily stage of the Delaware River at Trenton was 9 feet; the highest was 6.2 feet on the 2d.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 36 stations was 35.7°, which was 5.4° above normal. The northern highlands averaged but 4° cooler than the Southern Interior. The extreme highest temperature was 75° at Indian Mills on the 15th, and the lowest was 2° at Culpeper Lake on the 10th. The month averaged 2° warmer than January, and 4° warmer than December, so that December will have been the coldest month of the winter. In fact it was a degree of a degree warmer than March of last year.

PRECIPITATION.

The average precipitation of the State, as deduced from observations of 42 stations, was 5.37 inches, which was 1.56 inches

above normal. The greatest monthly amount was 7.28 inches at Elizabeth, and the least, 2.97 inches at Pleasantville. The average snowfall was 3.5 inches, which was about 7 inches below normal. The greatest snowfall was 6.5 inches at Somerville. The average number of days on which 0.01 inch or more precipitation fell was 8, which was practically normal. The greatest precipitation in 24 consecutive hours was 3 inches at Long Branch on the 1st.

WIND.

The prevailing wind direction was from the northwest and with a velocity of approximately 14 miles per hour, which was slightly above normal. The direction was practically the same over all portions of the State. The highest velocity was 70 miles per hour from the northeast at Long Branch on the 2d. Other days of high winds were the 26th and 27th, following the movement of the lowest barometric pressure of the month.

SUNSHINE AND CLOUDINESS.

The average number of clear days during the month was 11; partly cloudy, 6; cloudy, 11. The average amount of sunshine was approximately 54% of the possible, which was a little less than normal. The greatest amount of clear weather occurred in the Southern Interior, and the greatest cloudiness in the northern highlands.

MISCELLANEOUS PHENOMENA.

Atmospheric pressure, reduced to sea level, averaged 30.12 inches, which was 0.02 inch above normal. The average relative humidity was somewhat below normal, except along portions of the coast. Sleet occurred generally, except in the extreme southern portions of the State, on the 1st, and 2d. Dense fog occurred on the 1st, 6th, 7th and 15th.

COMPARATIVE DATA FOR FEBRUARY.

Year.	Temperature.			Precipitation.		
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.
1885.....	23.9	54	-2	3.93	5.85	1.44
1886.....	28.9	64	-10	5.42	8.00	4.13
1887.....	31.9	69	-6	5.24	6.74	4.13
1888.....	30.6	60	-5	3.53	6.01	2.04
1889.....	27.7	53	-3	2.49	3.80	1.65
1890.....	39.9	76	14	4.17	5.32	2.43
1891.....	38.0	71	1	5.11	7.20	3.70
1892.....	33.6	58	-7	1.63	3.62	0.67
1893.....	30.1	63	-11	5.73	8.90	3.14
1894.....	29.7	62	-11	4.42	6.17	3.25
1895.....	23.6	57	-12	1.28	2.34	0.55
1896.....	32.1	62	-12	6.77	10.05	4.82
1897.....	32.5	59	-6	3.61	6.37	2.38
1898.....	32.7	65	-15	3.48	5.45	1.55
1899.....	25.8	60	-17	6.06	8.77	3.78
1900.....	31.0	69	-6	5.30	7.88	3.27
1901.....	25.4	52	-6	0.94	1.65	0.69
1902.....	27.5	62	-7	6.24	8.44	4.29
1903.....	33.7	70	-16	4.87	6.60	3.74
1904.....	24.8	65	-16	2.45	3.09	0.70
1905.....	23.4	53	-18	2.53	3.96	0.70
1906.....	30.9	64	-12	2.58	3.85	1.77
1907.....	23.6	55	-22	2.67	3.90	1.82
1908.....	28.1	65	-17	4.79	7.44	2.85
1909.....	37.8	72	-2	1.96	6.78	3.55
1910.....	30.5	69	-11	3.08	4.81	1.06
1911.....	30.9	67	-12	2.78	4.06	1.76
1912.....	27.7	61	-14	2.49	3.12	1.48
1913.....	30.6	70	-5	2.49	3.21	1.48
1914.....	25.9	67	-17	2.85	4.34	1.89
1915.....	35.7	75	2	5.37	7.28	2.97

ERRATA FOR JANUARY, 1915.

Page 4.—Haddonfield, make highest temperature, 66°, read 60°; Woodbine, make lowest temperature, 13° on the 30th, read 12°, on the 1st.

Climatological data for February, 1915.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.							Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation of in. or more.	Clear.	Pt. cloudy.	Cloudy.		
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	24	34.2	+6.8	57	20	12	10	36	5.74	+1.42	2.35	.....	7	14	4	10	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	23	32.4	+6.1	54	15	7	5	33	3.43	-1.23	.....	2.0	9	14	9	5	nw.	George S. Briggs.
Culvers Lake.....	Sussex.....	848	14	.....	.....	.....	.....	2	10	.....	4.93	+1.58	1.21	3.5	9	16	3	9	e.	Brice E. Riker.
Dover.....	Morris.....	600	31	31.8	+5.6	55	15	10	10	31	6.41	+2.17	.....	4.0	9	9	7	12	.....	William C. Harris.
Layton.....	Sussex.....	480	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. M. Depue.
Newton.....	Sussex.....	678	35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	nw.	Lloyd A. Voorhees.
Phillipsburg.....	Warren.....	363	33	35.0	+7.2	56	20	12	10	33	5.34	+1.55	2.08	1.0	8	13	3	12	.....	D. Wilson Smith.
Sussex.....	Sussex.....	442	25	32.4	+6.2	60	23	10	10	30	4.00	+0.46	1.22	4.5	8	11	5	12	nw.	George Dymock.
Means and extremes...		.....	.....	33.2	+6.4	60	23	2	10	36	4.98	+0.99	2.35	3.0	8	13	5	10	nw.	
<i>The Red Sandstone Plain.</i>																				
Bayonne.....	Hudson.....	50	25	35.2	+4.7	61	15	13	10	25	5.91	+1.90	2.00	3.5	8	14	2	12	nw.	Erskine R. Eadie.
Bergen Point.....	Hudson.....	37	18	34.4	+4.0	62	15	12	10	33	6.33	+1.94	2.10	4.0	8	8	12	8	nw.	William H. Mitchell.
Boonton.....	Morris.....	400	25	33.8	.....	58	23	10	5	34	5.48	+1.27	2.01	4.6	8	15	6	7	nw.	J. W. Demmers.
Chatham.....	Morris.....	234	13	.....	.....	.....	.....	.....	.....	.....	5.62	+1.76	1.65	.....	9	.....	.....	.....	.....	Miss M. A. Butler.
Elizabeth.....	Union.....	45	36	35.8	+5.4	66	15	13	10	34	7.28	+3.02	.....	3.5	10	8	9	11	nw.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	27	36.3	+5.8	61	15	14	10	33	6.42	+3.03	2.68	5.0	8	14	3	11	nw.	Hiram E. Deats.
Highwood.....	Bergen.....	90	26	33.4	+4.7	57	15	11	5	27	6.37	+1.84	1.88	2.5	9	11	5	12	s.	Charles J. Bates.
Jersey City.....	Hudson.....	10	16	36.0	+4.8	54	15	14	10	23	6.11	+2.17	.....	4.3	8	9	7	12	nw.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	28	38.0	+7.6	63	15	16	15	26	6.56	+3.02	1.83	3.0	9	8	10	10	nw.	Samuel W. Cochran.
Little Falls.....	Passaic.....	180	12	34.4	.....	57	15	11	10	28	4.36	+0.07	1.78	.....	9	11	2	15	w.	Montclair Water Co.
Newark.....	Essex.....	159	73	36.4	+6.6	62	15	13	10	25	4.16	+0.48	1.87	3.2	9	12	3	13	n.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	139	62	35.8	+4.5	65	15	14	10	30	5.81	+2.12	2.00	2.7	8	10	9	9	ne.	N. J. Experiment Station.
Paterson.....	Passaic.....	80	44	35.8	+5.6	56	15	14	10	29	5.94	+1.54	1.58	3.7	8	6	11	11	nw.	Heber A. Probert.
Plainfield.....	Union.....	100	29	35.6	+5.4	63	15	13	10	28	6.61	+2.70	.....	6.2	8	10	7	11	nw.	John Neagle.
Pompton Plains.....	Morris.....	195	13	.....	.....	.....	.....	.....	.....	.....	6.24	+2.67	2.71	3.0	9	.....	.....	.....	.....	M. S. Taylor.
Somerville.....	Somerset.....	60	33	35.6	+5.6	65	15	13	10	37	5.90	+2.35	2.23	6.5	8	9	7	12	ne.	A. A. Macdonald.
South Orange.....	Essex.....	200	45	34.4	+5.4	62	15	13	10	23	6.29	+2.27	2.13	5.0	8	14	2	12	nw.	Dr. W. J. Chandler.
New York, N. Y.....		365	45	35.2	+4.5	60	15	13	10	21	5.03	+1.29	2.87	2.5	9	9	7	12	nw.	U. S. Weather Bureau.
Means and extremes...		.....	.....	35.4	+5.4	66	15	10	5	37	5.96	+2.01	2.68	4.0	8	11	6	11	nw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	34	38.0	+4.1	67	23	13	10	32	4.13	+0.03	1.95	3.0	9	15	1	12	w.	Henry A. Jorden.
Burlington.....	Burlington.....	12	29	36.4	.....	68	15	13	10	30	6.65	+2.91	2.58	4.0	8	16	3	9	nw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	23	37.5	+5.8	68	15	13	10	35	5.59	+1.57	1.85	5.5	9	9	10	10	nw.	George L. Wilson.
Haddonfield.....	Camden.....	75	28	37.2	+5.7	72	15	13	10	34	6.99	+3.67	2.78	3.4	9	8	8	12	nw.	Prof. Chas. F. Richardson.
Hammonton.....	Atlantic.....	103	18	.....	.....	.....	.....	.....	.....	.....	4.51	+0.62	2.00	3.0	11	11	9	8	.....	H. J. Rolfe.
Hightstown.....	Mercer.....	140	23	35.7	+5.6	66	15	13	10	33	5.89	+2.15	1.99	1.5	8	13	5	10	n.	Chas. W. Dunbar.
Imlaystown.....	Monmouth.....	185	27	36.6	+5.7	71	15	10	10	39	5.65	+2.07	2.10	2.0	8	13	4	11	w.	H. E. Bullock.
Indian Mills.....	Burlington.....	76	26	37.2	+5.1	75	15	11	10	38	5.60	+1.64	2.18	4.0	8	13	6	9	nw.	James M. Armstrong.
Lakewood.....	Ocean.....	54	12	36.0	+4.3	66	15	13	10	34	5.52	+2.19	2.25	2.5	9	8	8	12	w.	R. W. Holman.
Moorestown.....	Burlington.....	75	53	38.1	+7.1	70	15	14	10	34	6.42	+2.79	2.89	2.5	8	9	7	12	n.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	8	.....	.....	.....	.....	.....	.....	.....	3.54	.....	1.57	2.0	7	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	17	.....	.....	.....	.....	.....	.....	.....	2.97	+0.01	1.12	.....	8	14	6	8	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	44	36.0	+5.3	67	15	14	10	26	4.40	+1.21	2.54	3.1	10	9	7	12	nw.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	22	.....	.....	.....	.....	.....	.....	.....	3.83	-0.22	1.93	3.3	8	.....	.....	.....	.....	Frank R. Austin.
Vineland.....	Cumberland.....	87	47	38.2	+5.7	66	15	11	10	30	3.83	-0.22	1.93	3.3	8	.....	.....	.....	.....	E. V. C. Hendrickes.
Woodbine.....	Cape May.....	43	24	38.9	+6.3	65	23	12	10	29	3.93	-0.12	1.80	3.7	8	16	1	11	.....	Baron de Hirsch Agr. Sch.
Philadelphia, Pa.....		117	45	38.8	+6.0	67	15	16	10	24	5.55	+2.17	3.75	1.8	10	8	6	14	nw.	U. S. Weather Bureau.
Means and extremes...		.....	.....	37.2	+5.5	75	15	10	10	39	5.04	+1.47	2.89	3.1	9	12	6	10	nw.	
<i>The Sea Coast.</i>																				
Asbury Park*.....	Monmouth.....	22	26	35.6	+3.7	55	6	13	10	21	4.47	+0.64	2.26	3.0	8	11	5	12	.....	H. E. Denegar.
Atlantic City.....	Atlantic.....	16	42	36.5	+3.5	55	12	15	10	19	3.69	+0.42	1.87	2.2	8	10	6	12	nw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	31	37.5	+3.4	54	12	18	10	16	3.71	+0.42	1.43	5.0	8	11	5	12	nw.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	8	34.3	.....	55	15	12	10	21	6.60	.....	3.00	4.3	8	9	8	11	nw.	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	17	35.2	+4.5	58	15	16	10	19	4.51	+0.94	2.64	1.4	9	9	6	13	nw.	U. S. Weather Bureau.
Means and extremes...		.....	.....	35.9	+3.8	58	15	12	10	21	4.63	+0.59	3.00	3.2	8	10	6	12	nw.	
For the State.....		.....	.....	35.7	+5.4	75	15	2	10	39	5.37	+1.56	3.00	3.5	8	11	6	11	nw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining sections or division means.

* Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

†, precipitation is less than 0.01 inch rain or melted snow.

Daily precipitation for February, 1915.

Stations.	Day of month.																															Total.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
<i>The Highlands and Kittatinny Valley.</i>																																
Avidore.....	2.35	.85				*									.80	.21									1.18	.35						5.74
Charlotteburg.....	* 1.93	.20			T.	.30	T.								.30										* .70							3.13
Ivers Lake.....	1.21	.95	.05	T.		.48	T.	.01	T.						.47	.10								.94	.72	T.						4.48
Ver.....	* 2.85	.30			T.	.51									*	.64								* 2.11								6.41
Wilton.....																								1.05	.58							†
Wilton.....																																
Phillipsburg.....	2.08	1.00	.01		T.	.35	T.					T.			.33	.22								.97	.38							5.34
Sex.....	1.22	.78	.09			.25									*	.48								.52	.66							1.00
<i>The Red Sandstone Plain.</i>																																
Yonne.....	2.00	1.35	.13			.35			T.						.25	.40									.57	.86						5.91
Gen Point.....	2.10	1.57	.21		T.	.39									.32	.37								.45	.92							6.33
Wilton.....	.71	.01	T.	.12		.25		T.	T.	T.					T.	.56							T.	.08	1.65	.10						5.48
Wilton.....	1.10	1.65	.03	.08		.32									.05	.82								.07	1.42	.08						5.62
Wilton.....	* 1.10	* 1.65	.03	.08		.32									.05	.82								.07	1.42	.08						5.62
Wilton.....	1.78	.76	.16		.06	.20									.14	.59								.54	1.44							7.28
Wilmington.....	2.68	1.10	.40	T.	T.	.41		T.							.20	.45								.77	.41							6.42
Phwood.....	1.88	1.05	.20		.03	.49		T.							.57	.02							T.	1.03	1.10							6.37
Seaside City.....	1.91	1.54	.26		T.	.40	T.		T.						.01	.52								.49	.98							6.11
Wilton.....	1.83	1.63	.15	.10		.70		T.	T.						.11	.58							T.	.78	.68							6.56
Wilton.....	1.78	.76	.16		.06	.20									.32	.04								.78	.26							4.36
Wark**.....	1.87	.80	.12		*	.30	T.								.01	*	.56						T.	.40	.10	T.						4.16
W Brunswick.....	2.00	1.35	.18			.30		T.							.13	.49								.39	.97							5.81
Werson.....	1.58	1.23	.15	T.	T.	.43	T.	T.	T.						.50	.32							T.	.73	1.00	T.						5.94
Wilton**.....	2.65	.86	.32		T.	.40	T.		T.						.74	.05								1.19	.40							6.61
Wilton Plains**.....	.57	2.71	.12	.22		.49		T.							.10	.44								.04	1.44	.21						6.24
Wilton.....	2.23	1.32	.22			.36	T.								.19	.43								.66	.49							5.90
Wilton.....	2.13	.87	.20		*	.30	T.		T.						.75	.09								1.50	.45		T.					6.29
W York, N. Y.***.....	2.10	.89	.16	T.	.06	.19	T.		T.						.44	.08							T.	.73	.38	T.						5.03
<i>The Southern Interior.</i>																																
Wilton.....	.24	1.95	.33			.25				T.	T.				.43	.05							.20	.50	.18		T.					4.13
Wilton.....	1.60	2.58	.35	T.		.38			T.						.21	.34							T.	.84	.35	T.						6.65
Wilton.....	1.29	1.85	.55			.36	.02		T.						.20	.36								.70	.26							5.59
Wilton.....	2.05	2.78	.34			.34	.01		T.						.10	.42								.78	.17							6.99
Wilton.....	2.00	.22	.30	.01		.41	.01								*	.32								.42	.81	.01						4.51
Wilton.....	1.70	1.99	.28			.30									.12	.41								.34	.75							5.89
Wilton.....	1.30	2.10	.25			.25									.65									.20	.90							5.65
Wilton.....	.77	2.18	.60			.45	.04								T.	.42								.32	.82							5.60
Wilton.....	1.65	2.25	.18		T.	.40			T.						T.	.27								.10	.67							5.52
Wilton.....	1.39	2.89	.20	.05		.35									.50									.48	.56							6.42
Wilton.....	.03	1.57	.43			.30				T.					.47									.04	.70							3.54
Wilton.....	.22	1.12	.26	T.		.25				.02					T.	.27								.10	.73							2.97
Wilton***.....	2.01	.54	.29		.04	.24	T.		T.						.01	.44	.08						T.	T.	.60	.15	T.	T.				4.40
Wilton.....						.32	T.			T.					T.	.35								.46	.28		T.					3.83
Wilton.....	.21	1.93	.28			.32	T.			T.					T.	.35								.46	.28		T.					3.83
Wilton.....	.15	1.80	.50			.35				.02					.40									.16	.55							3.93
Wilton.....	2.92	.89	.16		.09	.14	T.		T.						.50	.09								.66	.09	T.						5.55
<i>The Sea Coast.</i>																																
Wilton.....	2.26	.92	.30		T.	.10			T.						.11	.11								.46	.21							4.47
Wilton.....	.97	.90	.36	T.		.28			T.	T.					.16	.28								.47	.27		T.					3.69
Wilton.....	.57	.91	.88			.21	T.		T.						.18	.39								.38	.19		T.					3.71
Wilton.....	3.00	1.65	.22		T.	.36	T.		T.						.19	.11								.77	.30							6.60
Wilton.....	1.97	.94	.12		.05	.23			T.						.30	.15								.46	.29							4.51

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24 hour period, midnight to midnight.

|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. † Incomplete.

* Precipitation included in the next following measurement. ** Precipitation for 24 hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

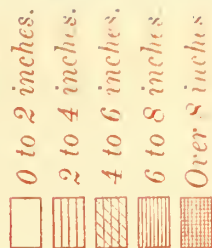
MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.				Moisture.		Sun. shine.
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	Percentage of possible sunshine.
							Miles per hour.	Direction.	Date.			
Atlantic City.....	30.14	30.60	11	29.51	25	9	29	e.	2	82	74	(6)
Bury Park.....	30.12	30.58	10	29.51	25							
Seaside May.....		30.63	11	29.62	25	10	34	nw.	27			
Seaside City.....	30.10	30.57	11	29.43	25							51
Seaside Branch.....	30.12	30.60	11	29.45	25	16	70	ne.	2	78	76	58
Seaside Park.....	30.12			29.56	25		30	nw.	27	73	70	51
New York, N. Y.....	30.11	30.58	11	29.43	25	20	60	se.	6	69	63	53
Philadelphia, Pa.....	30.14	30.59	11	29.55	20	12	42	ne.	2	81	70	53
Brooklyn Hook.....	30.12	30.59	11	29.45	25	18	48	nw.	27	87	86	53
Brooklyn Union.....	30.11	30.56	11	29.45	25	13	42	nw.	27	77	68	50

Daily temperatures for February, 1915.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.
<i>The Highlands and Kittatinny Valley.</i>																																
Belvidere.....	Maximum.....	36	28	26	35	36	45	40	35	32	35	43	46	45	49	47	41	42	44	57	55	54	52	55	52	42	36	41	..	..	..	42.6
	Minimum.....	24	18	19	20	19	33	31	25	21	12	16	26	25	34	40	35	32	20	20	21	23	25	32	46	38	28	19	22	..	..	25.9
Charlotteburg.....	Maximum.....	44	40	21	29	31	53	52	39	31	30	39	48	47	40	54	52	37	34	38	51	51	50	52	51	50	40	32	32	..	..	41.7
	Minimum.....	30	17	13	16	7	28	33	23	19	9	9	36	32	31	36	35	28	16	17	22	20	17	28	39	33	23	15	13	..	..	23.0
Dover.....	Maximum.....	39	30	23	32	32	51	41	31	27	32	39	46	39	39	55	44	36	35	40	53	51	48	52	51	51	37	28	35	..	..	39.9
	Minimum.....	30	19	19	16	11	33	29	22	13	10	13	34	23	32	36	32	25	17	19	22	21	21	30	41	35	26	16	19	..	..	23.7
Layton.....	Maximum.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	54	54	42	31	34	..	..	..
	Minimum.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	38	35	25	16	19	..	..	..
Newton.....	Maximum.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Minimum.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Phillipsburg.....	Maximum.....	36	35	24	33	35	45	41	34	31	34	45	47	46	46	55	49	39	41	43	56	55	53	55	54	53	40	34	40	..	..	42.8
	Minimum.....	27	20	19	20	21	32	32	24	20	12	19	36	27	34	41	38	32	22	20	23	26	27	34	45	38	29	19	22	..	..	27.1
Sussex.....	Maximum.....	32	30	22	34	34	48	45	36	29	32	40	48	41	40	47	47	37	34	40	49	52	52	60	53	53	39	31	33	..	..	40.6
	Minimum.....	..	15	17	16	13	33	32	26	19	10	13	35	25	32	35	36	29	17	16	19	22	24	33	39	36	25	16	20	..	..	*24.2
<i>The Red Sandstone Plain.</i>																																
Bayonne.....	Maximum.....	39	35	24	34	43	51	43	35	31	31	45	46	44	46	61	43	39	36	41	52	50	47	51	52	51	41	32	37	..	..	42.1
	Minimum.....	32	22	20	20	21	37	33	26	23	13	20	36	29	35	38	38	31	21	24	27	29	28	36	41	40	29	20	23	..	..	28.3
Bergen Point.....	Maximum.....	39	35	24	31	41	51	41	35	31	32	45	47	45	45	62	52	40	35	45	51	45	48	51	52	52	42	34	38	..	..	42.5
	Minimum.....	30	20	19	19	19	29	34	19	20	12	20	35	29	34	29	38	31	20	24	24	27	26	34	42	39	24	18	24	..	..	26.4
Boonton.....	Maximum.....	38	37	25	35	33	52	48	40	31	35	41	49	48	44	53	53	40	37	43	57	55	50	58	52	43	42	34	36	..	..	42.5
	Minimum.....	25	14	19	10	31	32	26	22	12	14	35	24	33	37	38	32	22	22	24	21	22	29	40	38	22	18	21	..	..	25.1	
Elizabeth.....	Maximum.....	38	37	24	35	35	54	44	37	32	34	46	44	48	66	55	42	40	45	57	51	53	57	53	51	43	38	41	..	..	44.5	
	Minimum.....	29	22	21	20	14	33	34	25	22	13	17	36	27	34	39	41	31	21	23	23	24	24	33	42	39	30	19	23	..	..	27.1
Flemington.....	Maximum.....	37	33	34	38	34	53	43	36	33	38	43	50	45	50	61	52	40	40	46	58	57	56	57	54	54	43	35	43	..	..	45.1
	Minimum.....	29	21	22	23	17	31	33	25	23	14	18	35	27	33	40	39	31	22	22	25	25	25	32	43	39	31	21	23	..	..	27.5
Highwood.....	Maximum.....	37	33	22	28	35	48	41	34	31	32	42	46	40	44	57	49	40	33	39	49	47	49	54	53	52	41	31	38	..	..	40.9
	Minimum.....	32	14	20	19	11	33	32	27	21	12	15	35	27	33	38	35	30	20	22	24	22	23	35	34	38	29	20	22	..	..	25.8
Jersey City.....	Maximum.....	39	35	25	32	38	49	55	35	30	33	44	47	40	46	54	50	42	37	42	52	50	47	53	51	50	41	33	38	..	..	42.1
	Minimum.....	32	23	22	21	23	38	35	27	24	14	25	36	36	35	43	39	32	22	23	29	34	30	36	45	40	30	20	22	..	..	29.9
Lambertville.....	Maximum.....	39	40	35	36	39	48	48	40	33	33	45	50	49	53	63	57	46	42	45	53	53	54	58	58	55	44	40	41	..	..	46.3
	Minimum.....	31	26	25	23	16	35	35	27	25	16	23	38	29	36	41	41	34	24	24	27	27	29	35	46	40	31	22	25	..	..	29.7
Little Falls.....	Maximum.....	40	33	27	33	42	51	45	38	33	33	43	51	42	47	57	47	40	42	42	52	51	50	55	53	57	38	30	36	..	..	43.1
	Minimum.....	27	21	20	17	30	34	30	25	13	11	15	32	26	35	40	33	23	20	22	26	24	24	33	41	35	23	20	22	..	..	25.8
Newark.....	Maximum.....	40	36	25	33	39	55	50	37	33	30	42	50	47	51	62	56	42	39	45	55	51	50	55	52	48	44	34	38	..	..	44.2
	Minimum.....	32	24	20	19	24	31	34	26	21	13	21	36	30	34	38	40	33	21	23	30	32	30	37	44	40	29	19	22	..	..	28.5
New Brunswick.....	Maximum.....	39	37	24	33	32	50	45	38	32	32	44	49	47	47	65	54	41	37	42	53	58	51	54	55	54	41	37	40	..	..	44.0
	Minimum.....	30	20	20	16	31	33	25	23	14	20	35	29	34	38	40	33	21	22	28	28	25	33	42	39	30	20	22	..	..	27.5	
Paterson.....	Maximum.....	39	37	24	34	33	53	47	39	33	35	44	49	47	48	56	53	41	39	44	56	51	52	55	51	50	43	36	39	..	..	43.8
	Minimum.....	29	20	20	18	32	34	27	23	14	18	37	29	34	38	40	33	22	23	27	26	26	26	34	42	39	29	20	23	..	..	27.8
Plainfield.....	Maximum.....	40	34	25	34	35	50	42	35	31	33	44	49	47	47	63	51	40	38	43	54	50	53	57	55	53	40	34	40	..	..	43.4
	Minimum.....	33	20	21	20	35	34	25	23	13	18	35	29	35	40	37	31	21	24	27	26	25	33	43	39	30	20	23	..	..	27.9	
Somerville.....	Maximum.....	39	38	31	39	34	51	42	39	34	35	44	49	47	48	65	54	43	39	44	57	54	54	57	55	54	44	39	40	..	..	45.3
	Minimum.....	30	20	21	21	16	31	30	25	21	13	16	28	25	32	39	39	31	20	20	20	21	21	29	43	38	30	19	22	..	..	25.8
South Orange.....	Maximum.....	39	32	24	31	35	48	41	34	29	29	42	48	40	45	62	50	38	36	41	51	48	48	52	52	42	39	26	19	..	..	41.2
	Minimum.....	32	19	21	21	19	35	34	26	20	13	19	35	30	35	39	37	27	21	24	31	29	27	34	43	39	26	19	18	..	..	27.6
New York, N. Y.....	Maximum.....	43	29	26	31	45	53	42	35	29	33	43	48	42	45	60	50	38	33	40	51	48	46	49	52	49	38	30	37	..	..	41.8
	Minimum.....	29	22	22	19	24	39																									

Scale of Shades.



UNIVERSITY OF ILLINOIS
URBANA

U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU

CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

MARCH, 1915.

BY

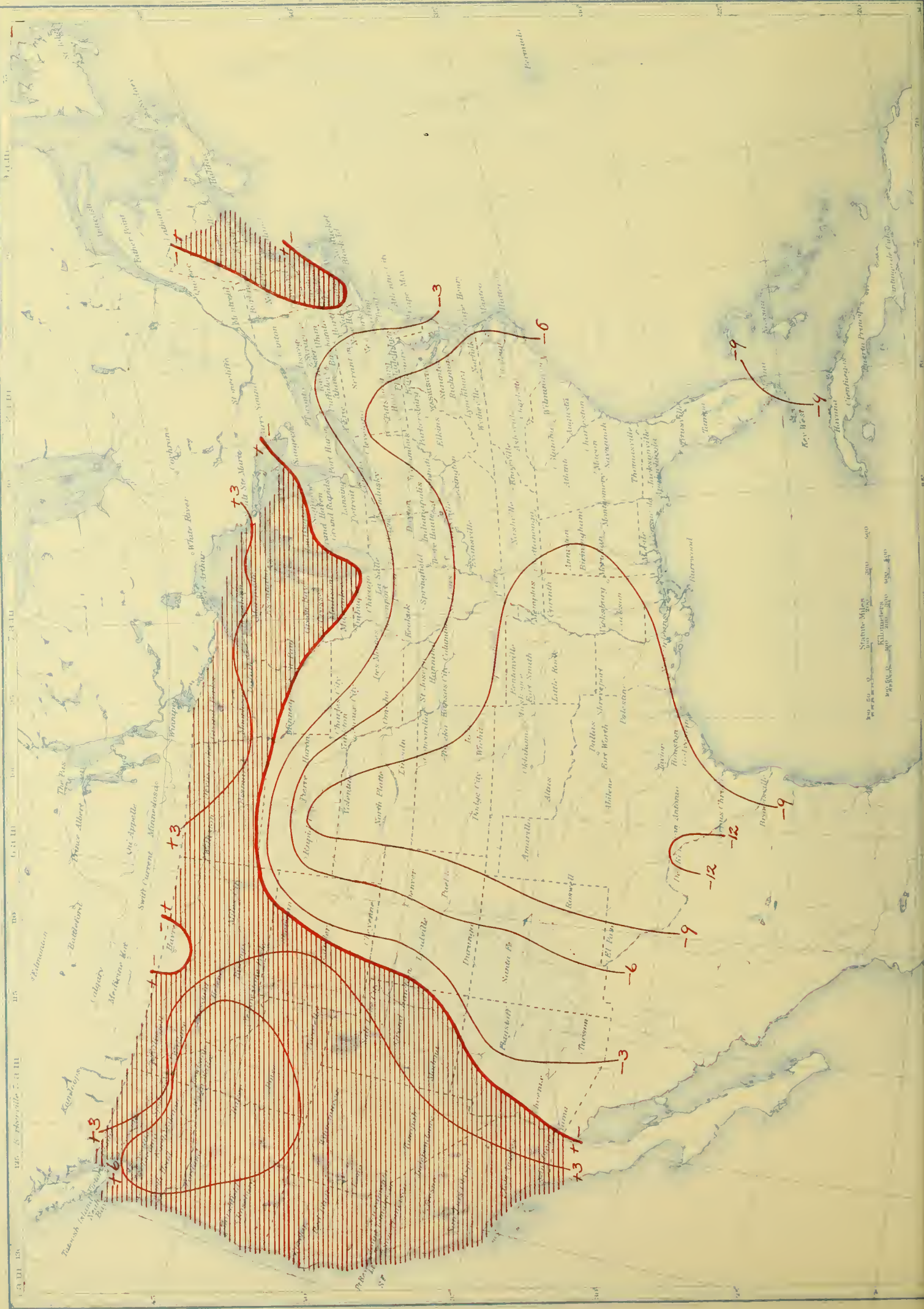
G. HAROLD NOYES

SECTION DIRECTOR



TRENTON, N. J.
WEATHER BUREAU OFFICE
APRIL 26, 1915.

Departure of the Mean Temperature from the Normal, March, 1915.



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Section Director.

L. XXVIII. TRENTON, N. J., MARCH, 1915. No. 3.

GENERAL SUMMARY.

The weather in March in this region is ordinarily unpleasant, with about four inches of precipitation, much of which is snow, and a temperature low enough to preclude rapid evaporation. This year, March has upset its consistently disagreeable record, and it has proved to be the coldest and driest since 1885. There have been several colder records, but not in combination with a lack of moisture. Stations where instrumental records of humidity, wind and sunshine are maintained have never heretofore reported such a small percentage of moisture, high percentage of sunshine, and continuously great velocity of northerly winds as in this month under review. Approximately two thirds of the month the wind was northwest, with clear skies, and temperatures under normal.

The greater portion of the precipitation occurred in the storm of the 6th-7th and was both rain and snow. Toward the close of the month, with the bright sunshine and dry atmosphere, the ground was workable and considerable plowing was done.

The mean daily stage of the Delaware River at Trenton was 3 feet, and at Phillipsburg 3.1 feet, which was almost 3 feet higher than the ten year average.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 40 stations, was 36.1°, which was 1.9° below normal. The lowest station mean was at Newton and was but 3° colder than the warmest, Cape May. The extreme highest temperature was 63° at Long Branch on the 25th, and the lowest was 6° at Culvers Lake on the 4th. The month averaged but a fraction of a degree warmer than February and it has been colder but seven times since 1884. March last year was only a fraction of a degree colder than this year.

PRECIPITATION.

The average precipitation, of the State as deduced from observations of 45 stations, was 1.13 inches, which was 2.87 inches below normal. The greatest monthly amount was 1.65 inches at Long Branch, and the least, 0.58 inch at Sandy Hook. The average snowfall was 7.4 inches, and ranged from nearly 10 inches in the Red Sandstone Plain to 3 inches along the shore. The greatest snowfall was 16 inches at Elizabeth. The average number of days on which 0.01 inch or more precipitation fell was 4. The greatest precipitation in 24 consecutive hours was 3.3 inches at Long Branch. The only record of less precipitation in March, than the current month, was in the year 1885 when the amount was 1.10 inches.

WIND.

The prevailing wind direction was from the northwest, with an approximate hourly velocity of 15 miles, which was of considerable more force than usual. The highest velocity was 63 miles per hour from the northwest on the 30th at Long Branch. Other days when high wind was commonly noted were the 13th, 18th, 23rd, 25th, 26th, 27th, 28th, 29th, 30th, and 31st.

SUNSHINE AND CLOUDINESS.

The average number of clear days during the month was 20; partly cloudy 7; cloudy 4. The average amount of sunshine was 78% of the possible, which was much above normal.

COMPARATIVE DATA FOR MARCH.

Year.	Temperature.			Precipitation.		
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.
1885.....	30.4	66	2	1.10	2.29	0.23
1886.....	37.7	70	9	3.70	5.27	2.59
1887.....	37.7	61	8	3.34	5.45	2.19
1888.....	32.8	72	0	5.71	8.22	3.75
1889.....	40.5	67	19	3.79	6.49	1.98
1890.....	37.6	78	0	6.08	7.92	4.14
1891.....	37.2	68	4	5.06	8.02	2.05
1892.....	34.4	64	6	4.75	7.21	3.11
1893.....	37.0	68	6	3.73	6.26	2.36
1894.....	44.2	83	12	1.77	2.65	1.09
1895.....	36.7	72	7	3.16	4.66	1.77
1896.....	34.0	69	-8	5.34	7.38	3.14
1897.....	40.0	77	8	2.78	4.32	1.55
1898.....	45.1	77	16	3.33	4.25	2.56
1899.....	38.6	73	13	6.54	9.58	3.45
1900.....	35.6	67	-9	3.51	4.96	2.48
1901.....	39.2	75	-8	4.64	8.07	2.40
1902.....	43.9	77	0	4.34	7.20	3.16
1903.....	47.6	79	13	5.13	8.53	3.60
1904.....	37.2	72	1	3.43	4.76	2.02
1905.....	39.8	87	-7	3.95	5.06	2.80
1906.....	34.4	62	-15	5.09	6.77	2.91
1907.....	41.2	88	-11	3.04	4.38	1.81
1908.....	41.8	89	7	2.80	4.92	1.06
1909.....	38.3	74	-6	3.48	4.66	2.31
1910.....	44.5	88	10	1.22	2.36	0.29
1911.....	37.6	76	3	3.38	4.50	2.64
1912.....	36.9	72	3	7.61	9.61	5.95
1913.....	44.8	79	-1	5.15	7.73	2.47
1914.....	35.4	75	-6	3.65	6.45	2.02
1915.....	36.4	72	-6	4.68	6.48	2.46

SLEET.

As a general principle precipitation is classified according to its form just before striking the ground or objects near the ground, rather than by its effects after coming to a state of rest, for the character of the surface upon which and the local conditions under which it is deposited vary so widely (within a few feet sometimes) that classification then becomes impossible.

"Only the precipitation that occurs in the form of frozen or partly frozen rain should be called sleet." True sleet, then, rarely adheres in large quantities to vertical surfaces, but does not collect on horizontal surfaces. If frozen hard and dry, it frequently lies on the frozen ground like coarse salt, making walking difficult but without much danger from slipperiness. When there is a considerable proportion of "partly frozen rain," and a few hours of cold weather follow, it becomes frozen into a solid mass, hard to remove from walks and pavements. Sleet probably results from rain forming in clouds having a temperature slightly above 32°, then falling through a considerable layer of air sufficiently cold to freeze the rain drops as they approach the ground. It is more frequent in the middle and latter part of the winter.

There are two phenomena recognized by effects and external appearance and often confused with sleet in the popular mind, but which result from mixtures of snow, sleet and rain. One of these is designated in the nomenclature of the International Meteorological Committee, "Silver frost," English "Silver thaw." **** "This refers to an accumulation of snow and sleet on the limbs of trees, in which the snow is the main feature, so that the appearance is silvery white and rough." The other form is designated as, "Glazed frost." **** "This refers to an accumulation of snow and ice on the trees, in which the ice is in excess and the external appearance is smooth and transparent."

In the United States we have a phenomenon which falls most nearly in the class of "Glazed frost," yet differs in that there is no snow mixed with the precipitation. It consists entirely of super-cooled rain and the surfaces on which it is deposited must have a temperature somewhat below 32°. By super-cooled rain is meant rain having a temperature below 32° which has not begun to congeal, but which turns instantly to ice when it strikes objects. The term "Ice storm" is coming to be applied to this phenomenon, though it has not been used extensively by the Weather Bureau, probably because it relates to a condition caused by precipitation rather than to the form in which the precipitation occurs.

"Silver frosts," "Glazed frosts" and "Ice storms" render sidewalks and pavements slippery and dangerous and when heavy cause great destruction to aerial telephone, telegraph and electric wires generally. The accumulation sometimes amounts to a pound or more per foot of wire. The damage results not only from the great weight, but from the increased area exposed to the force of the wind which is usually strong at some time during such storms.

"Hail is formed by accretions consisting of concentric layers of ice, or alternate layers of ice, and snow." This form of precipitation is confined almost wholly to the summer months and is nearly always associated with thunderstorms, heavy rains and strong convectional air currents.

(From Monthly Meteorological Summary, New York City, February, 1915, by James H. Searr, District Forecaster.)

Climatological data for March, 1915.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.							Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation 40 in. or more.	Clear.	Pt. cloudy.	Cloudy.		
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	24	35.7	-1.1	57	23	17	4	32	0.76	-3.28	0.40	7.5	2	26	2	3	.....	Samuel J. Hixson.
Charlotteburg††.....	Passaic.....	719	23	32.7	-2.0	55	25	14	†4	33	0.76	-3.18	.....	8.0	3	25	4	2	nw.	George S. Briggs.
Culvers Lake††.....	Sussex.....	848	14	.....	.....	.....	.....	6	4	.....	0.78	-2.65	0.58	11.0	4	23	6	2	nw.	Brice E. Riker.
Dover.....	Morris.....	600	31	33.2	-1.7	57	25	15	4	31	1.26	-2.64	0.90	10.0	5	14	12	5	.....	William C. Harris.
Layton.....	Sussex.....	480	15	33.0	-1.2	59	25	15	†4	34	0.98	-2.69	0.59	9.7	3	21	4	6	n.	A. M. Depue.
Newton.....	Sussex.....	678	35	32.6	-3.2	56	25	11	4	29	1.21	-2.39	1.00	10.0	4	18	6	7	n.	Lloyd A. Voorhees.
Phillipsburg.....	Warren.....	363	33	35.7	-2.2	58	25	18	†4	28	0.93	-2.72	0.44	10.7	4	20	6	5	nw.	D. Wilson Smith.
Sussex.....	Sussex.....	442	25	33.4	-3.0	58	25	16	4	33	0.60	-3.07	0.35	8.5	2	18	6	7	nw.	George Dymock.
Means and extremes.....				33.9	-2.1	59	25	14	†4	34	0.91	-2.83	1.00	9.4	3	21	6	4	nw.	
<i>The Red Sandstone Plain.</i>																				
Bayonne.....	Hudson.....	50	25	36.3	-1.7	59	25	19	4	26	0.83	-3.40	0.41	10.0	3	25	3	3	nw.	Erskine R. Eadie.
Bergen Point††.....	Hudson.....	37	18	36.4	-1.4	59	25	18	4	30	1.08	-3.14	0.71	8.0	2	15	14	2	nw.	William H. Mitchell.
Boonton.....	Morris.....	400	25	35.1	.....	53	†13	18	†4	29	0.80	-2.94	0.52	10.2	5	26	3	2	nw.	J. W. Demmers.
Chatham.....	Morris.....	234	13	.....	.....	.....	.....	.....	.....	.....	0.96	-2.91	0.55	.....	4	.....	.....	.....	.....	Miss M. A. Butler.
Elizabeth.....	Union.....	45	36	37.2	-1.2	61	25	18	4	32	1.56	-2.70	.....	16.0	4	17	10	4	nw.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	27	37.0	-0.5	60	25	19	†4	32	1.27	-2.34	1.00	11.0	7	22	4	5	nw.	Hiram E. Deats.
Highwood.....	Bergen.....	90	26	34.8	-1.4	59	25	17	4	30	0.97	-3.18	0.61	8.2	3	17	10	4	nw.	Charles J. Bates.
Jersey City.....	Hudson.....	10	16	37.6	-0.6	60	25	19	4	25	1.19	-2.91	1.10	9.0	2	18	9	4	nw.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	28	38.4	-0.6	59	25	20	4	28	1.47	-2.64	0.72	9.5	4	17	12	2	nw.	Samuel W. Cochran.
Little Falls.....	Passaic.....	180	§12	35.1	.....	58	25	15	4	30	1.27	-2.72	0.98	9.7	3	21	3	7	w.	Montclair Water Co.
Newark.....	Essex.....	159	73	37.3	-0.2	60	25	19	4	26	0.90	-3.03	0.83	9.0	2	20	3	8	nw.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	110	62	36.6	-1.6	58	25	18	4	30	0.75	-3.16	0.43	7.0	3	21	6	4	nw.	N. J. Experiment Station.
Paterson.....	Passaic.....	80	44	37.8	-0.7	62	25	19	4	28	1.05	-3.18	0.44	7.2	3	15	13	3	nw.	Heber A. Probert.
Plainfield.....	Union.....	100	29	36.2	-0.4	60	25	18	4	28	1.41	-2.40	1.20	14.1	3	15	13	3	nw.	John Neagle.
Pompton Plains.....	Morris.....	195	13	.....	.....	.....	.....	.....	.....	.....	1.05	-3.10	0.63	.....	5	.....	.....	.....	.....	M. S. Taylor.
Somerville.....	Somerset.....	60	33	35.8	-1.1	59	25	17	4	33	0.73	-3.22	0.43	6.5	4	17	10	4	nw.	A. A. Macdonald.
South Orange.....	Essex.....	200	45	35.6	-1.2	58	25	18	4	25	0.76	-3.05	0.55	12.0	3	20	6	5	nw.	Dr. W. J. Chandler.
New York, N. Y.....		365	45	36.4	-1.1	55	25	18	3	24	1.14	-2.96	1.08	7.7	3	19	7	5	nw.	U. S. Weather Bureau.
Means and extremes.....				36.5	-1.0	62	25	15	4	33	1.06	-2.94	1.20	9.8	4	19	8	4	nw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	34	38.3	-2.8	61	25	20	4	30	1.25	-3.22	1.00	6.0	3	20	7	4	w.	Henry A. Jorden.
Burlington.....	Burlington.....	12	§29	36.4	.....	60	25	20	4	29	1.53	-2.55	0.80	7.5	5	27	3	1	nw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	23	37.0	-2.8	61	25	20	4	31	0.80	-3.18	0.34	5.5	4	17	12	2	nw.	George L. Wilson.
Haddonfield.....	Camden.....	75	28	37.2	-2.0	60	25	19	4	31	1.58	-2.31	1.24	13.5	6	21	7	3	nw.	Prof. Chas. F. Richardson.
Hammondtown.....	Atlantic.....	103	18	.....	.....	.....	.....	.....	.....	.....	1.10	-3.27	0.71	2.5	4	16	12	3	.....	H. J. Rolie.
Hightstown.....	Mercer.....	140	23	35.8	-3.2	59	25	18	4	28	1.35	-3.01	0.80	8.0	4	22	3	6	w.	Chas. W. Dunbar.
Imlaystown.....	Monmouth.....	185	27	†34.3	-5.4	61	25	16	30	†36	1.50	-2.69	1.05	8.0	2	.....	.....	.....	w.	H. E. Bullock.
Indian Mills.....	Burlington.....	76	26	36.0	-3.8	61	25	18	4	35	1.17	-2.93	0.63	5.0	3	18	11	2	nw.	James M. Armstrong.
Lakewood.....	Ocean.....	54	12	34.8	-3.8	59	25	18	4	32	1.46	-2.36	0.94	6.0	2	14	11	6	nw.	R. W. Holman.
Moorestown.....	Burlington.....	75	53	37.4	-1.4	61	25	20	†4	29	1.35	-2.46	0.93	8.2	3	17	11	3	nw.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	8	.....	.....	.....	.....	.....	.....	.....	1.40	.....	1.19	1.7	3	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	17	.....	.....	.....	.....	.....	.....	.....	1.36	-1.88	1.23	0.3	4	27	1	3	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	44	36.0	-3.1	57	25	20	4	22	1.37	-2.67	1.13	8.4	4	17	9	5	nw.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	22	37.0	-2.0	62	25	17	1	34	1.25	-3.14	0.85	1.0	2	25	4	2	nw.	Frank R. Austin.
Vineland.....	Cumberland.....	87	47	37.0	-3.3	60	25	19	27	30	0.87	-3.29	0.69	.....	3	.....	.....	.....	nw.	E. V. C. Hendricks.
Woodbine.....	Cape May.....	43	24	37.6	-2.5	58	25	20	†1	30	1.53	-2.55	1.25	0.5	3	27	1	3	w.	Baron de Hirsch Agr. Sch.
Philadelphia, Pa.....		117	45	38.7	-1.3	58	25	22	4	22	1.00	-2.45	0.82	8.2	4	19	9	3	nw.	U. S. Weather Bureau.
Means and extremes.....				36.5	-3.0	62	25	16	30	36	1.30	-2.77	1.25	5.5	3	21	7	3	nw.	
<i>The Sea Coast.</i>																				
Asbury Park*.....	Monmouth.....	22	26	37.0	-1.3	60	25	19	4	25	.....	.....	.....	3.2	4	17	8	6	w.	H. E. Denegar.
Atlantic City.....	Atlantic.....	16	42	37.1	-1.7	54	25	20	4	27	1.29	-2.44	1.20	0.3	3	21	5	5	nw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	31	38.8	-2.0	57	25	24	4	20	0.94	-2.79	0.84	0.5	4	15	12	4	nw.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	8	36.0	.....	63	25	18	†3	28	1.65	.....	1.33	5.4	4	16	8	7	nw.	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	17	36.6	-0.1	57	25	22	4	19	0.58	-4.20	0.54	5.7	2	14	13	4	nw.	U. S. Weather Bureau.
Means and extremes.....				37.1	-1.3	63	25	18	†3	28	1.12	-3.14	1.33	3.0	3	17	9	5	nw.	
For the State.....				36.1	-1.9	63	25	14	†4	36	1.13	-2.87	1.33	7.4	3	20	7	4	nw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

* Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville.

Stations.

Day of month.

Total.

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24 hour period, midnight to midnight.

|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.

* Precipitation included in the next following measurement. **Precipitation for 24 hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.				Moisture.		Sun. shine.
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	Percentage of possible sunshine.
							Miles per hour.	Direction.	Date.			
Atlantic City.....	29.92	30.35	5	29.59	22	9	26	nw.	30	67	56	79
Bury Park.....	29.90	30.34	4	29.64	22							
Cape May.....		30.35	4	29.64	16	11	36	e.	6			
Cape May City.....	29.86	30.35	5	29.57	22							79
Cape May Branch.....	29.88	30.37	5	29.57	17	20	63	nw.	30	55	50	77
Cape May Park.....							30	nw.	30	60	62	75
Cape May, N. Y.....	29.86	30.36	5	29.56	22	22	62	nw.	3	58	47	79
Philadelphia, Pa.....	29.91	30.37	5	29.59	22	13	36	nw.	30	64	59	80
Philadelphia Hook.....	29.87	30.37	5	29.58	22	19	56	w.	30	82	82	72
Philadelphia, N. Y.....	29.88	30.36	5	29.56	22	14	40	nw.	30	66	50	82

Daily temperature for March, 1915.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.				
<i>The Highlands and Kittatinny Valley.</i>																																				
Belvidere.....	Maximum...	42	44	36	47	41	36	40	35	47	46	45	42	52	52	53	52	44	47	52	53	44	46	57	56	53	53	48	53	46	47	46	46.9			
	Minimum...	19	26	19	17	22	30	30	24	19	21	26	24	21	29	23	28	23	22	23	24	29	30	29	29	33	20	21	30	18	23	24	24.5			
Charlotteburg.....	Maximum...	33	41	39	41	41	34	35	38	39	38	39	34	44	44	43	45	41	47	46	43	44	47	48	55	51	37	47	43	39	41	42.0	42.0			
	Minimum...	17	24	16	14	16	27	28	29	18	24	29	18	21	29	22	25	20	20	23	28	29	29	32	32	29	30	17	14	27	15	23	23.4	23.4		
Dover.....	Maximum...	35	42	33	43	36	30	34	42	38	41	40	37	46	47	48	47	39	44	51	49	41	42	50	51	57	47	42	48	41	35	43	42.5	42.5		
	Minimum...	18	26	16	15	20	28	29	25	20	24	37	21	22	29	23	27	21	21	20	29	30	33	30	29	24	18	18	25	16	22	24.0	24.0			
Layton.....	Maximum...	36	44	36	42	40	36	37	42	38	40	41	36	51	47	47	46	40	42	49	50	41	40	54	51	59	48	42	51	45	36	41	43.5	43.5		
	Minimum...	18	25	17	15	16	27	28	22	17	19	29	19	20	24	22	21	19	19	23	23	29	29	33	26	28	29	17	17	26	15	24	22.5	22.5		
Newton.....	Maximum...	30	40	39	40	40	37	35	38	37	42	40	35	44	44	45	43	42	41	49	46	43	44	48	50	56	50	40	47	42	38	42	23.1	23.1		
	Minimum...	20	20	15	11	12	31	28	25	18	19	29	19	18	28	22	24	20	21	23	27	29	30	32	29	32	27	18	23	28	15	23				
Phillipsburg.....	Maximum...	39	43	39	45	40	39	40	41	41	46	43	39	50	45	50	50	44	46	52	51	48	41	53	50	58	53	44	51	46	40	44	45.5	45.5		
	Minimum...	19	26	19	18	22	29	30	28	22	25	30	24	24	30	25	25	24	24	25	29	30	32	33	32	35	30	20	23	30	18	23	25.3	25.3		
Sussex.....	Maximum...	35	43	36	45	39	34	35	39	38	40	41	37	47	46	46	45	38	41	51	48	38	47	51	51	58	51	41	51	43	35	42	43.0	43.0		
	Minimum...	18	20	18	16	18	27	29	25	19	23	30	22	21	30	22	25	22	20	23	26	28	30	32	28	29	28	18	18	27	17	25	23.7	23.7		
<i>The Red Sandstone Plain.</i>																																				
Bayonne.....	Maximum...	38	43	38	42	37	35	37	40	39	43	45	39	48	49	49	49	42	43	52	51	43	46	48	54	59	54	43	51	45	38	46	44.7	44.7		
	Minimum...	22	28	21	19	23	31	30	29	23	28	31	26	26	32	27	32	26	24	27	33	31	32	34	35	36	30	22	27	33	20	26	27.9	27.9		
Bergen Point.....	Maximum...	38	45	39	43	38	35	36	42	40	43	44	39	49	51	50	52	46	43	44	56	51	45	47	51	54	59	50	43	53	38	46	45.0	45.0		
	Minimum...	24	26	22	18	24	31	29	29	21	26	31	25	24	39	26	32	26	24	26	31	29	31	29	34	34	29	24	26	31	20	25	27.3	27.3		
Boonton.....	Maximum...	37	44	41	44	40	36	39	42	38	42	42	37	53	48	49	48	43	43	45	53	51	45	44	52	53	53	43	43	42	39	44	44.0	44.0		
	Minimum...	19	28	19	18	22	29	29	28	23	27	27	24	34	30	23	30	23	24	22	22	28	32	28	33	26	29	30	21	18	26	18	26	25.0	25.0	
Elizabeth.....	Maximum...	42	46	42	47	42	36	40	46	44	46	47	43	53	53	53	53	47	47	55	55	49	48	54	56	61	55	47	54	46	40	50	48.3	48.3		
	Minimum...	20	27	20	18	24	31	31	27	20	25	31	26	23	27	23	31	26	21	24	28	30	29	33	27	30	38	21	22	30	20	24	26.0	26.0		
Flemington.....	Maximum...	42	47	39	45	40	33	34	43	42	46	46	42	53	52	54	52	44	48	54	52	51	45	48	54	55	59	49	42	50	43	37	48	44.3	44.3	
	Minimum...	21	27	20	19	25	31	30	28	20	26	29	26	23	32	25	31	25	21	23	23	26	24	27	32	30	29	29	20	20	31	20	22	24.6	24.6	
Highwood.....	Maximum...	39	45	37	40	39	34	38	39	41	43	45	40	48	50	49	49	49	43	43	52	51	45	48	54	55	59	49	42	50	43	37	48	44.3	44.3	
	Minimum...	19	24	20	17	21	30	30	28	20	25	30	25	21	27	21	26	26	22	23	26	26	27	32	30	29	29	20	20	31	20	22	24.6	24.6		
Jersey City.....	Maximum...	39	44	38	43	39	35	38	43	42	45	46	41	48	51	50	51	44	48	54	50	51	44	48	54	55	59	49	42	50	43	37	48	44.3	44.3	
	Minimum...	22	29	21	19	25	32	31	30	23	29	32	27	26	32	28	32	27	25	30	31	32	32	34	33	34	35	37	39	29	30	35	21	27	28.1	28.1
Lambertville.....	Maximum...	41	44	44	45	46	42	42	41	41	43	44	43	48	48	48	48	42	43	52	51	45	48	54	55	59	49	42	50	43	37	48	44.3	44.3		
	Minimum...	23	29	22	20	27	33	34	32	25	28	32	27	26	34	30	33	27	27	28	34	31	32	32	35	36	35	38	40	23	29	35	21	27	28.1	28.1
Little Falls.....	Maximum...	37	45	35	42	41	35	43	42	39	43	43	39	48	48	48	42	43	52	51	45	48	54	55	59	49	42	50	43	37	48	44.3	44.3			
	Minimum...	21	30	18	15	21	30	29	24	21	23	29	24	23	30	27	29	29	22	23	28	33	30	33	30	30	24	20	20	28	25	23	25.0	25.0		
Newark.....	Maximum...	39	45	42	45	40	38	39	44	42	45	45	40	50	51	51	50	46	43	55	52	52	45	48	54	55	59	49	42	50	43	37	48	44.3	44.3	
	Minimum...	21	28	21	19	25	30	30	24	28	32	26	26	34	28	31	26	24	29	35	32	32	32	35	38	39	29	22	27	31	20	26	28.1	28.1		
New Brunswick.....	Maximum...	38	44	41	43	42	35	35	40	39	42	44	40	49	49	53	52	53	44	52	52	45	48	54	55	59	49	42	50	43	37	48	44.3	44.3		
	Minimum...	20	27	20	18	24	30	30	28	21	25	30	26	24	31	25	31	25	22	24	26	32	31	32	34	34	34	30	21	24	29	20	23	26.0	26.0	
Paterson.....	Maximum...	40	46	41	45	40	36	40	45	44	46	47	44	52	53	52	52	46	47	54	52	45	48	54	55	59	49	42	50	43	37	48	44.3	44.3		
	Minimum...	22	28	21	19	24	30	31	30	24	28	32	26	25	32	26	31	26	24	26	32	31	32	32	34	34	34	30	21	24	29	20	23	26.0	26.0	
Plainfield.....	Maximum...	40	45	37	45	39	34	40	43	40	45	45	40	50	49	50	51	43	45	53	52	42	45	53	52	42	45	48	45	53	45	37	48	44.3	44.3	
	Minimum...	21	27	20	18	24	31	31	30	22	27	30	26	25	31	25	31	25	24	25	31	30	31	30	31	34	30	34	30	21	24	29	20	26	26.0	26.0
Somerville.....	Maximum...	39	45	41	45	38	35	40	40	40	44																									



Scale of Shades.

0 to 2 inches.
2 to 4 inches.
4 to 6 inches.
6 to 8 inches.
Over 8 inches.

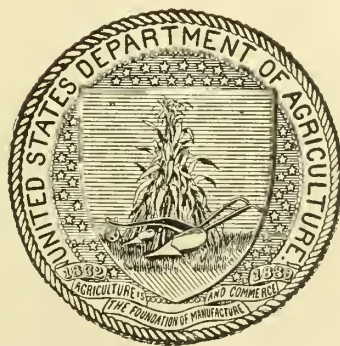
U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU
CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

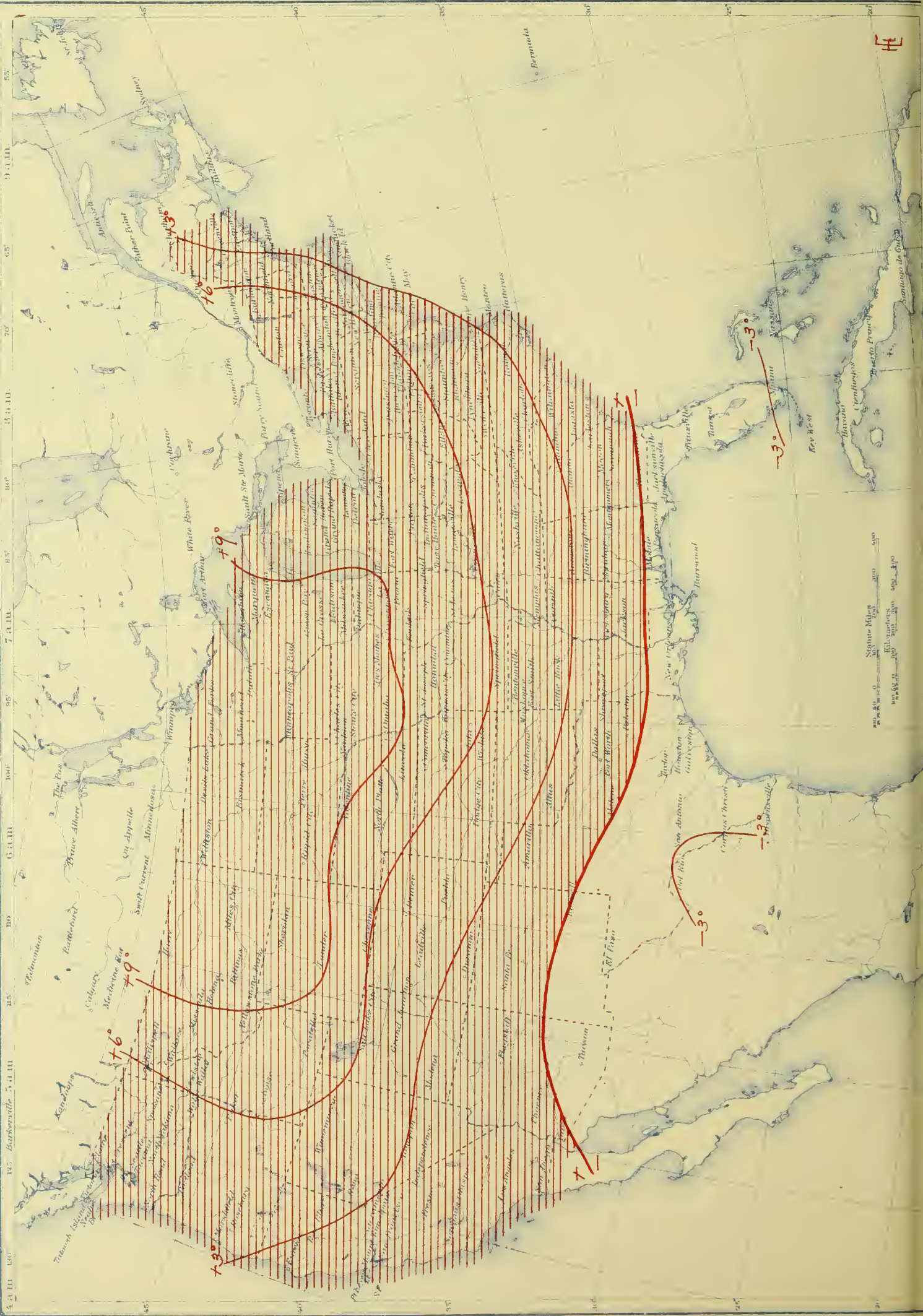
APRIL, 1915.

BY
G. HAROLD NOYES
SECTION DIRECTOR



TRENTON, N. J.
WEATHER BUREAU OFFICE
MAY 19, 1915.

This is a historical map of the Gulf of Mexico and surrounding regions, likely from the 19th century. The map shows the coastline of the Gulf, with numerous place names labeled, including New Orleans, Mobile, and various coastal settlements. A prominent red line is drawn across the map, representing a survey track or a specific route. The line starts near the top left, curves around the Gulf, and ends near the bottom right. The map includes latitude and longitude markings, with latitude lines labeled from 25° to 35° North and longitude lines labeled from 80° to 95° West. A scale bar is located in the bottom right corner, indicating distances in miles and kilometers. The map is oriented with North at the top.



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Section Director.

XXVIII. TRENTON, N. J., APRIL, 1915. No. 4.

GENERAL SUMMARY.

The weather during April, 1915, was, for the most part, favorable for nearly all lines of work usually in progress in this season of transition from winter to summer. One distinctive feature was a great snow storm, which occurred on the 3d, the Sunday before Easter. The snow commenced just before daybreak in the southeastern portion, and had overspread the remainder of the State by the middle of the forenoon. The air and ground temperature being considerably above the melting point, the snow at first melted as it fell, and did not accumulate to any great extent until late in the forenoon, from which time accumulation was unusually rapid. The snow was light, and its water content per bulk was low. The storm continued furiously during the afternoon, driven by a northeasterly gale of winds of 40 miles per hour, and finally ceased about 9 p. m. In the central portions the depth of snow averaged about 13 inches, which in many instances broke all April records. Along the shore, and in the northern highlands, the snowfall was less, amounting to but 6 to 8 inches. The snow caused practically no damage, except wire trouble, which was temporary. Business usually incident to Easter Sunday suffered severely, and the social enjoyment of this festival was greatly curtailed. There was some sleighing early Sunday, but the temperature rose rapidly to slightly over 50°, with the sun breaking through the clouds, and the snow disappeared almost as fast as it came, both by melting and evaporation, so that by sunset there were many patches of bare ground.

The mean monthly temperature for the State was the highest ever recorded, and the maxima on the 25th and 27th of from 96° broke many local April records.

The amount of precipitation was below normal in all sections except Morris and Gloucester counties, and this in connection with one of the driest Marches on record, has resulted in an unusually dry Spring. The warmth and dry weather, however, have aided early growth and farming operations, and the fruit was in bloom by the close of the month well up toward the northern boundary of the State.

The mean daily stage of the Delaware River at Trenton was 1.6 feet, which is the lowest April mean of the past 11 years, being 1.6 feet below normal.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 39 stations, was 54.4°, which was 5.3° above normal. The warmest region was the western counties along the lower Delaware, and the coldest along the shore, where the monthly averages from Atlantic City to Sandy Hook varied less than half a degree. The highest temperature recorded in the State was 96° at Belvidere on the 25th, and at Elizabeth on the 27th, and the lowest was 20° at Culvers Lake and Lakewood on the 3d and 5th, respectively. Daily ranges of temperature from

the afternoon of the 25th to the next morning, and from the 27th to the next morning, were unusually large, changes of 48° being frequent.

PRECIPITATION.

The average precipitation of the State, as deduced from observations of 45 stations, was 2.71 inches, which was 0.78 inch below normal. The greatest monthly amount was 4.13 inches at Bergen Point, and the least 1.28 inches at Pleasantville. The days on which most of the precipitation occurred were the 3d, 6th-7th, 11th-12th, and light amounts on scattered days from the 20th to the close of the month. The first thunderstorms of the season were reported in northern sections on the 10th, and throughout the State on the 11th. The average number of days with .01 inch or more precipitation was 9, which was 1 below normal. The greatest precipitation in 24 consecutive hours was 2.27 inches at Dover during the storm of the 3d.

WIND.

The prevailing wind direction was from the northwest, and the average velocity was approximately 13 miles per hour. There was little variation in the prevailing direction in any portion of the State. The highest velocity was 80 miles per hour from the northeast on the 3d at Long Branch.

SUNSHINE AND CLOUDINESS.

The average number of clear days for the month was 14; partly cloudy, 10; cloudy, 6; which was 3 more clear days, and 3 less cloudy days than normal. Sunshine averaged about 62% of the possible.

MISCELLANEOUS.

Atmospheric pressure, reduced to sea level, averaged 30.04 inches, which was 0.04 inch above normal. Hail was reported in scattered localities with the thunderstorms of the 10th, 11th, 26th, and 28th. Other thunderstorms occurred on the 27th, 29th, and 30th. Solar halos were reported in a few instances on the 2d, 5th, 12th, 16th, and 22d. Dense fog occurred on the 16th, 24th, 25th, 28th, and 29th, and at scattered points on other dates. Light frosts were reported on the 5th, 16th, and 22d.

COMPARATIVE DATA FOR APRIL.

Year.	Temperature.			Precipitation.			No. of days.			60 inch or more precip.
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	
1885.....	48.4	88	26	2.79	2.86	0.89	.....	.....	.....	.....
1886.....	50.6	86	27	3.40	5.48	1.86	.....	.....	.....	.....
1887.....	47.3	87	16	2.70	3.77	0.91	.....	.....	12	7
1888.....	47.9	92	22	3.28	4.68	1.89	.....	.....	6	9
1889.....	51.2	83	25	5.32	7.25	2.92	.....	.....	14	12
1890.....	50.4	86	21	2.65	4.58	1.89	.....	.....	7	8
1891.....	52.0	88	20	2.19	3.80	1.39	13	11	6	8
1892.....	49.3	87	19	2.49	4.41	1.05	9	13	8	8
1893.....	49.2	82	19	5.21	7.12	2.97	9	10	12	11
1894.....	50.3	88	10	3.09	4.86	1.71	12	9	9	9
1895.....	49.1	89	19	4.88	7.75	3.47	11	7	12	10
1896.....	52.4	98	12	1.35	2.30	0.64	13	10	5	7
1897.....	50.4	89	19	3.79	6.58	2.17	14	11	5	9
1898.....	47.8	81	13	3.74	4.94	2.17	8	11	11	11
1899.....	49.9	88	18	1.73	3.25	0.48	16	10	4	4
1900.....	50.8	82	18	2.29	3.03	1.59	14	9	7	6
1901.....	48.3	89	23	6.31	10.22	3.46	8	7	15	12
1902.....	50.2	93	20	3.62	5.99	2.45	7	16	7	11
1903.....	50.9	92	18	3.97	7.03	2.40	13	6	11	10
1904.....	46.7	85	16	3.42	4.71	2.00	8	11	11	12
1905.....	49.9	84	18	2.88	4.03	1.53	9	13	8	11
1906.....	51.2	87	17	3.64	6.42	1.17	15	10	5	8
1907.....	45.2	83	19	3.78	8.67	2.06	11	9	10	11
1908.....	51.2	93	13	2.72	3.86	1.42	14	9	7	11
1909.....	50.2	88	17	5.97	8.90	3.84	10	11	9	13
1910.....	53.5	88	20	5.34	7.56	3.43	9	11	10	12
1911.....	47.4	88	14	4.11	5.58	2.87	10	10	10	11
1912.....	50.4	82	18	3.56	6.02	1.81	9	10	11	11
1913.....	52.1	89	19	5.78	8.53	4.14	14	7	9	11
1914.....	48.4	89	15	3.68	4.78	2.35	13	10	7	11
1915.....	54.4	96	20	2.71	4.13	1.28	14	10	6	19

Climatological data for April, 1915.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.							Precipitation, in inches.				No. of days.				Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation .01 in. or more.	Clear.	Pt. cloudy.	Cloudy.		Prevailing direction of wind.
<i>The Highlands and Kittatinny Valley.</i>																			
Belvidere.....	Warren.....	289	24	55.8	+6.2	96	25	25	5	44	2.95	-0.32	0.93		8				Samuel J. Hixson. George S. Briggs. Brice E. Riker. William C. Harris. A. M. Depue.
Charlotteburg.....	Passaic.....	719	23	52.5	+5.8	91	25	31	5	41	2.90	-1.03	.....	5.0	7	20	7	3	
Culvers Lake†.....	Sussex.....	848	14	.....	.....	.....	.....	20	†3	.....	2.96	-0.91	0.81	5.9	11	18	8	4	
Dover.....	Morris.....	600	31	52.4	+5.1	93	25	24	5	43	4.07	+0.56	2.27	9.7	8	.....	.....	.....	
Layton.....	Sussex.....	480	15	53.0	+6.5	94	25	22	5	48	2.47	-0.84	0.49	4.8	8	18	6	6	
Newton.....	Sussex.....	678	35					25	5										Lloyd A. Voorhees. D. Wilson Smith. George Dymock.
Phillipsburg.....	Warren.....	363	33	56.3	+6.7	95	25	28	5	44	3.04	+0.02	0.79	7.0	8	17	8	5	
Sussex.....	Sussex.....	442	25	53.4	+5.1	90	†25	23	2	39	2.32	-0.93	0.98	4.0	7	17	2	11	
Means and extremes.....				53.9	+5.9	96	25	20	†3	48	2.96	-0.49	2.27	6.1	8	18	6	6	nw.
<i>The Red Sandstone Plain.</i>																			
Bayonne.....	Hudson.....	50	25	53.9	+4.9	93	27	29	3	43	2.64	-1.04	1.20	17.0	10	16	5	9	Erskine R. Eadie. William H. Mitchell. J. W. Demmers. Miss M. A. Butler. L. B. Bonnett.
Bergen Point†.....	Hudson.....	37	18	54.1	+5.6	93	27	27	5	43	4.13	+0.24	2.09	12.0	8	7	20	3	
Boonton.....	Morris.....	400	25	54.0	.....	93	25	28	3	44	3.91	+0.15	1.99	7.5	12	20	4	6	
Chatham.....	Morris.....	234	13	.....	.....	.....	.....	.....	.....	.....	2.69	-0.96	1.20	12.0	9	.....	.....	.....	
Elizabeth.....	Union.....	45	36	55.0	+4.2	96	27	23	5	45	3.42	-0.15	1.70	15.0	10	5	20	5	
Flemington.....	Hunterdon.....	140	27	55.9	+6.8	95	25	27	5	44	3.49	+0.05	1.24	10.0	9	12	15	3	Hiram E. Deats. Charles J. Bates. S. K. Pearson, Jr. Samuel W. Cochran. Montclair Water Co.
Highwood.....	Bergen.....	90	26	51.8	+3.3	92	27	21	5	41	2.49	-0.90	1.08	15.0	9	10	13	7	
Jersey City.....	Hudson.....	10	16	55.4	+6.0	94	27	30	†3	43	2.72	-0.98	1.32	14.0	9	7	17	6	
Lambertville.....	Hunterdon.....	80	28	57.2	+6.8	90	27	30	5	37	3.17	-0.23	0.78	8.0	9	14	14	2	
Little Falls.....	Passaic.....	180	†12	52.8	.....	90	†25	25	†2	40	2.74	-0.80	1.10	15.0	12	13	2	15	
Newark.....	Essex.....	159	73	54.5	+5.4	94	27	28	3	45	3.11	-0.62	1.57	15.8	11	15	3	12	Prof. William Wiener. N. J. Experiment Station. Heber A. Probert. John Neagle. M. S. Taylor
New Brunswick.....	Middlesex.....	110	62	55.1	+5.4	91	27	29	†3	41	2.75	-1.04	1.03	10.5	10	15	7	8	
Paterson.....	Passaic.....	80	44	56.2	+5.9	95	27	29	†3	45	3.05	-0.44	1.73	17.3	11	7	19	4	
Plainfield.....	Union.....	100	29	55.1	+6.9	94	27	30	2	40	3.17	-0.73	1.40	14.0	10	8	16	6	
Pompton Plains.....	Morris.....	195	13	.....	.....	.....	.....	.....	.....	.....	3.42	-1.07	1.17	.....	11	.....	.....	.....	
Somerville.....	Somerset.....	60	33	54.2	+5.5	93	27	22	5	42	2.47	-1.08	0.99	17.0	8	14	8	8	A. A. Macdonald. Dr. W. J. Chandler. U. S. Weather Bureau.
South Orange.....	Essex.....	200	45	54.0	+5.7	90	27	28	4	38	3.07	-0.42	1.30	16.0	11	15	9	6	
New York, N. Y.....	Essex.....	365	45	53.4	+5.3	91	27	28	3	42	2.10	-1.20	1.18	10.2	11	7	14	9	
Means and extremes.....				54.6	+5.6	96	27	21	5	45	3.08	-0.59	2.09	13.5	10	12	11	7	nw.
<i>The Southern Interior.</i>																			
Bridgeton.....	Cumberland.....	30	34	57.4	+5.6	93	25	21	3	36	1.34	-2.09	0.65	15.0	4	15	8	7	Henry A. Jorden. D. S. B. McCoy. George L. Wilson. Prof. Chas. F. Richards. H. J. Rolfe.
Burlington.....	Burlington.....	12	29	55.5	.....	88	25	25	5	42	3.18	-0.19	0.90	12.0	7	.....	.....	.....	
Clayton.....	Gloucester.....	126	23	55.9	+5.6	94	27	23	5	43	4.06	+0.92	2.12	21.2	9	21	8	1	
Haddonfield.....	Camden.....	75	28	56.0	+5.2	93	27	26	5	41	3.36	+0.26	1.23	18.0	11	9	19	2	
Hammonton.....	Atlantic.....	103	18	.....	.....	.....	.....	.....	.....	.....	2.07	-1.77	1.20	12.0	7	12	13	5	
Hightstown.....	Mercer.....	140	23	54.7	+4.9	93	27	26	5	42	2.49	-0.42	1.38	10.5	8	21	3	6	Chas. W. Dunbar. H. E. Bullock. James M. Armstrong. R. W. Holman. Geo. L. Gillingham.
Imlaystown.....	Monmouth.....	185	27	53.6	+3.0	93	27	23	2	45	2.81	-0.69	0.80	10.0	9	17	3	10	
Indian Mills.....	Burlington.....	76	26	55.6	+5.3	95	27	25	2	44	3.45	+0.32	1.96	17.0	10	11	17	1	
Lakewood.....	Ocean.....	54	12	53.5	+4.6	93	27	20	5	42	1.75	-1.86	1.10	12.0	9	9	12	9	
Moorestown.....	Burlington.....	75	53	56.0	+6.0	93	27	27	5	39	2.84	-0.35	0.86	16.0	8	13	15	2	
Northfield.....	Atlantic.....	25	8								1.49		0.97	8.0	5				William L. Flick. Lincoln Van Gilder. U. S. Weather Bureau. Frank R. Austin. E. V. C. Hendricks.
Pleasantville.....	Atlantic.....	26	17	.....	.....	.....	.....	.....	.....	.....	1.28	-2.24	0.77	.....	5	22	4	4	
Trenton.....	Mercer.....	190	44	54.9	+5.1	93	27	29	3	40	3.04	-0.25	1.70	16.0	10	10	13	7	
Tuckerton.....	Ocean.....	23	22	53.2	+5.3	92	25	22	5	43	1.69	-2.10	1.20	9.0	5	15	12	3	
Vineland†.....	Cumberland.....	87	47	56.0	+5.3	93	27	23	5	40	1.55	-1.79	0.78	10.0	7	.....	.....	.....	
Woodbine.....	Cape May.....	43	24	55.1	+5.6	89	27	25	5	40	1.96	-1.62	1.20	7.0	8	24	4	2	Baron de Hirsch Agr. S. U. S. Weather Bureau.
Philadelphia, Pa.....	.....	117	45	57.3	+6.5	93	27	30	3	39	4.23	+1.32	2.32	19.4	11	11	14	5	
Means and extremes.....				55.2	+5.1	95	27	20	5	45	2.46	-0.92	2.12	12.9	8	16	10	4	w.
<i>The Sea Coast.</i>																			
Asbury Park.....	Monmouth.....	22	26	51.5	+3.4	85	27	29	†3	38	1.70	-1.97	0.92	9.2	8	9	11	10	Wilbur H. Pancoast. U. S. Weather Bureau. U. S. Weather Bureau. William D. Martin, Jr. U. S. Weather Bureau.
Atlantic City.....	Atlantic.....	16	42	51.8	+4.2	85	27	30	3	33	2.17	-0.82	1.39	6.0	9	7	13	10	
Cape May City.....	Cape May.....	17	31	53.0	+4.6	83	27	31	3	25	1.90	-1.09	1.17	8.8	8	11	15	4	
Long Branch.....	Monmouth.....	25	8	51.6	.....	86	25	27	3	39	1.85	.....	0.92	9.2	9	7	12	11	
Sandy Hook.....	Monmouth.....	22	17	51.8	+5.1	89	27	31	3	40	2.00	-2.29	0.76	5.5	10	9	12	9	
Means and extremes.....				51.9	+4.3	89	27	27	3	40	1.92	-1.54	1.39	7.7	9	9	12	9	nw.
For the State.....				54.4	+5.3	96	†25	20	†3	48	2.71	-0.78	2.27	11.5	9	14	10	6	nw.

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville, Bergen Point is Bayonne, Vineland, is South Vineland.

Daily precipitation for April, 1915.

Stations.	Day of month.																															Total.		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
<i>The Highlands and Kittatinny Valley.</i>																																		
Andover.....			.65								.93	.11												.22			.13		.48	.24	.19		2.95	
Charlotteburg.....			* .27			.15					* 2.00													.22		.11	T.			.15	T.		2.90	
Conover Lake.....	T.		.28	.08		.20	.09				.81	.10											.40		.32		.32		.17	.50	.01		2.99	
Conover.....			.97			.17				.03	2.24												.25		.01		.12		.28				4.07	
Conover.....			.49	T.		.21	.13				.42												.46			.22		.05	.49				2.47	
Conover.....			.60			.28	.15				1.20																						†	
Ellipsburg.....			.65	T.		.12					.77	.18									T.		.23				T.	.79	.17	.13			3.04	
Essex.....			.30			.34					.98												.45			.05	.02	.18					2.32	
<i>The Red Sandstone Plain.</i>																																		
Conover.....			1.12	.08		.13	.01				.42	.25											.20			.15		.15		.13			2.64	
Conover Point.....			1.96	.13		.13	T.				.43												.84	T.		T.		.10	.20	.34			4.13	
Conover II.....				.75		T.	.09	.01			.51	1.99									.01		.13	.04		T.	.07	.14	.06	.11			3.91	
Conover II.....			* 1.20			.05	.03				.36	.68											.08	.10			.15		.04				2.69	
Conover.....			* 1.70			.10	T.				.24	.58			T.							.02		.17			T.	.24	.18	.19			3.42	
Conover.....			1.00	.05		.15	T.				.30	1.24					T.				T.	.04		.11			T.	.26	.05	.29			3.49	
Conover.....			1.05	.03		.07	.01				.57	.27											.15			T.	.04	.16	.14				2.49	
Conover City**.....			1.32	T.		.09	T.			T.	.47	.21			T.						T.		.21			.06	.08	T.	.14	.14			2.72	
Conover.....			* .78			.13					.22	.62										.18		.06				.65	.08	.45			3.17	
Conover Falls**.....			1.10			.07	.02			.04	.84	.17											.15			.08	.12	.03	.09	.03			2.74	
Conover**.....			1.57			.10	.01			.01	.46	.29									T.		.18			.11	.10	T.	.15	.13			3.11	
Conover Brunswick.....			1.03	.02		.10	T.				.20	.63										.03		.02				.17	.27	.28			2.75	
Conover.....			1.67	.06		.10	.04				.36	.48											.15		.11	.03		.02	.03				3.05	
Conover**.....			1.40			.12	T.			T.	.38	.35									T.		.10		.04	.37	.13	.16	.12				3.17	
Conover Plains II.....				.81			.18				.58	1.17											.18	.09		.13	.07	.04	.08	.09			3.42	
Conover.....			.99			*	*				.27	.50											.08					.22	.10	.31			2.47	
Conover Orange.....			1.30	.10			*				.66	.34											.20		T.	.06	.20		.08	.13			3.07	
Conover N. Y.***.....			1.13	.05		.09	T.			T.	.24	.10			T.						T.		.20			.03	.04	.01	.15	.06			2.10	
<i>The Southern Interior.</i>																																		
Conover.....			*	.65		.10					.32																.27						1.34	
Conover.....			.90	.18		T.					.44	.45											.08		T.			.13	.10	.40	.50		3.18	
Conover.....			1.82	.30		.09					.48	.13														.02	.52	.11	.59				4.06	
Conoverfield.....			1.21	.02		.03					.42	.06	.02				T.					.16			.01		T.	.12	.67	.64			3.36	
Conovermont.....			1.20			.09					.34	.08																.22	.02	.12			2.07	
Conovertown.....			1.28	.10		.05					.29	.50										T.	.15		T.				.32	.30	.50		3.49	
Conoverstown.....			.80			*					.05	.30											.30		.04			.52	.40	.40			2.81	
Conover Mills.....			1.96	.40		.08					.22	.07						.03					T.		.02		T.	.04	.27	.08	.28			3.45
Conover.....			* 1.10			.02					.33	.05											.13		.03			.03	.03				1.75	
Conoverstown.....			.69	.17		.03					.73											.03		T.		T.			.10	.55	.50			2.84
Conoverfield.....			.97			.07					.39	.04																	.02			T.	1.49	
Conoverville.....			.77			.10					.10	.25	.05															.01		T.			1.28	
Conover***.....			1.70	T.		.03				T.	.49	.06				T.	T.					.13			.01		T.	.05	.29	.24	.04		3.04	
Conoverkerton.....			* 1.20			.12					.33	.04																	.27				1.69	
Conoverland.....			.78	.01		*					.38		.06			T.							T.					.27	.05				1.55	
Conoverbine.....			1.10	.10		.08					.50	.06										.01	.03				T.	.01	.07		T.		1.96	
Conover Philadelphia, Pa.***.....	T.		2.28	.04		.02	T.				.96	T.	.02			T.							.10			.02		T.	.08	.23	.46	.02		4.23
<i>The Sea Coast.</i>																																		
Conover Park**.....			.92			.08					.19	.02										.14		T.			T.	.06	.23	T.	.06		1.70	
Conover City***.....			1.39			.05					.56	.04	.06								T.		.01		.01		T.	.01		.01	.04		2.17	
Conover May City***.....			1.17			.08					.45	.11	.02									.04			.02			.01		T.			1.90	
Conover Branch**.....			.92			.08					.20	.05				T.					T.		.18		T.		T.	.13	.19	.05	.05		1.85	
Conover Hook***.....			.51			.11				.01	.73	.03											.01		T.			.24	.08	.10	.18		2.00	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24 hour period, midnight to midnight.

†† Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.

* Precipitation included in the next following measurement. **Precipitation for 24 hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.				Moisture.		Sun. shine.
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	
							Miles per hour.	Direction.	Date.			
Atlantic City.....	30.06	30.54	22	29.44	3	8	49	ne.	3	78	73	67
Asbury Park.....	30.04	30.55	22	29.51	3							
Cape May.....		30.50	22	29.55	3	9	32	nw.	3			
Jersey City.....	30.01	30.54	22	29.55	30							61
Long Branch.....	30.04	30.55	22	29.50	3	17	80	ne.	3	67	63	61
Newark.....	30.05	30.45	22	29.65	30		25	e.	3	68	66	60
New York, N. Y.....	30.02	30.56	22	29.54	30	17	70	sw.	11	66	58	63
Philadelphia, Pa.....	30.07	30.55	22	29.52	30	11	46	ne.	3	65	57	63
Asbury Hook.....	30.04	30.55	22	29.52	3	15	66	s.	11	95	92	60
Denton.....	30.04	30.53	22	29.50	30	12	52	ne.	3	69	62	61

Daily temperature for April, 1915.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.
<i>The Highlands and Kittatinny Valley.</i>																																
Belvidere.....	Maximum ...	49	51	46	56	50	65	67	73	74	80	73	64	61	64	68	72	68	74	82	86	78	64	70	84	96	86	95	78	75	73	70.7
	Minimum.....	33	28	33	29	25	37	32	30	34	46	58	54	36	32	30	31	45	37	46	53	47	36	37	49	52	54	55	48	47	55	41.0
Charlotteburg.....	Maximum.....	42	46	47	48	48	55	53	66	69	77	71	61	60	55	60	66	64	68	77	75	76	60	71	71	91	85	89	85	73	69	65.9
	Minimum.....	29	23	27	27	21	34	38	33	31	44	56	42	34	32	26	27	44	37	50	60	42	26	43	51	50	46	62	44	43	50	39.1
Dover.....	Maximum.....	46	47	36	48	47	56	51	67	69	73	62	61	56	58	60	69	61	69	79	81	63	56	69	72	93	80	91	63	71	71	64.2
	Minimum.....	30	25	28	29	24	36	36	33	33	44	54	47	35	31	33	33	45	38	53	59	35	31	45	52	50	48	61	45	44	51	40.5
Layton.....	Maximum.....	44	49	41	51	47	63	58	69	72	76	72	64	57	61	67	69	70	72	82	82	67	60	70	79	94	86	92	72	71	68	67.5
	Minimum.....	31	25	28	29	22	35	33	28	30	48	55	41	35	26	25	27	42	34	44	52	43	28	46	47	46	54	53	50	47	55	38.6
Newton.....	Maximum.....	45	46	41	49	47	57	55	66	70	74	70	62	59	58	62	67	63	69	78	...	...	...	...	...	...	...	...	...	...	...	...
	Minimum.....	30	26	27	28	25	35	36	31	36	46	56	46	34	31	32	33	37	37	47	...	...	...	...	...	...	...	...	...	...	...	...
Phillipsburg.....	Maximum ...	49	50	46	53	50	66	63	70	75	79	73	64	62	62	66	70	65	71	81	84	79	15	71	81	95	88	94	80	77	72	70.0
	Minimum.....	33	29	29	29	28	38	39	33	36	48	58	49	37	33	35	35	45	39	51	56	47	39	48	50	51	53	58	49	46	57	42.6
Sussex.....	Maximum.....	41	48	40	49	47	58	55	68	72	76	71	63	56	59	65	69	62	69	80	81	72	59	72	81	90	83	90	82	74	69	66.7
	Minimum.....	30	23	27	29	24	36	37	33	35	47	57	47	35	31	33	31	44	36	48	45	42	31	46	45	51	52	57	48	47	53	40.0
<i>The Red Sandstone Plain.</i>																																
Bayonne.....	Maximum ...	49	51	41	50	47	52	56	69	65	73	67	65	56	60	61	69	66	71	79	83	69	53	70	69	90	79	93	69	66	55	64.8
	Minimum.....	33	31	29	30	30	39	39	36	40	47	42	51	40	38	38	37	47	45	54	60	48	40	47	52	47	49	61	45	46	49	43.0
Bergen Point.....	Maximum.....	50	51	42	49	47	52	55	68	65	74	67	66	54	59	63	68	63	70	80	83	67	54	69	78	89	71	93	81	71	60	65.3
	Minimum.....	32	30	29	29	27	39	37	35	39	45	52	51	40	39	39	36	48	45	54	64	48	39	46	50	46	48	59	47	45	49	42.9
Boonton.....	Maximum.....	42	50	46	51	50	55	54	69	70	75	74	62	60	61	65	68	64	70	80	82	76	62	69	71	93	89	91	83	72	64	67.3
	Minimum.....	32	24	28	29	30	32	32	32	35	40	49	44	38	35	30	38	43	42	50	62	46	32	45	56	49	48	61	48	46	49	41.3
Elizabeth.....	Maximum.....	53	52	45	55	53	56	58	73	72	78	67	68	61	62	64	73	66	75	83	85	73	60	72	74	93	80	96	82	75	66	68.7
	Minimum.....	32	26	30	28	23	38	34	31	35	41	58	49	39	35	35	34	46	41	50	57	49	33	47	53	48	49	56	48	46	49	41.3
Flemington.....	Maximum.....	50	53	45	55	54	62	61	72	73	77	73	65	63	63	65	73	63	70	83	85	76	64	72	74	95	82	93	84	76	73	69.8
	Minimum.....	33	28	29	30	27	38	35	36	33	41	58	48	39	37	33	33	44	40	50	59	49	34	48	51	51	49	61	47	45	54	42.0
Highwood.....	Maximum.....	50	50	37	48	48	51	54	69	70	70	64	66	54	58	61	68	63	69	81	81	64	58	72	69	89	71	92	74	72	55	64.3
	Minimum.....	29	25	29	29	21	37	32	30	34	46	51	48	37	34	31	32	31	44	49	49	47	33	47	52	48	47	55	...	...	...	39.3
Jersey City.....	Maximum.....	52	51	43	53	48	52	57	72	67	70	67	67	55	62	62	71	68	74	82	84	66	57	71	68	91	70	94	74	69	53	65.7
	Minimum.....	33	33	30	30	33	41	46	37	45	46	52	52	41	38	41	39	49	45	55	64	50	44	47	56	48	67	47	47	50	...	45.1
Lambertville.....	Maximum.....	48	51	51	54	54	62	62	70	71	76	77	66	55	65	67	61	71	81	81	78	68	70	76	89	87	90	89	73	72	...	69.8
	Minimum.....	35	33	32	32	30	40	39	39	39	47	59	51	41	37	36	37	46	43	52	56	51	39	51	53	54	52	60	52	47	55	44.6
Little Falls.....	Maximum.....	49	50	39	50	52	55	55	67	71	74	70	65	57	60	63	70	65	70	80	81	67	59	72	72	90	80	90	60	65	55	65.1
	Minimum.....	30	25	27	30	25	35	35	33	35	45	53	45	38	35	41	48	35	40	50	54	42	31	45	50	50	48	50	45	45	48	40.5
Newark.....	Maximum.....	47	48	38	52	50	54	54	70	70	74	65	64	56	60	63	70	65	72	81	84	64	57	69	70	92	75	94	56	71	53	64.6
	Minimum.....	32	33	28	30	35	39	42	41	47	48	52	50	40	38	40	39	50	45	58	60	48	41	49	54	47	49	56	46	47	49	44.4
New Brunswick.....	Maximum.....	49	50	46	50	49	56	58	71	73	78	80	68	67	59	59	63	63	72	80	82	77	59	68	69	90	79	91	86	74	63	67.8
	Minimum.....	32	30	29	29	30	39	39	35	37	45	58	50	52	37	36	37	45	41	44	50	40	37	47	53	53	47	63	45	44	52	42.4
Paterson.....	Maximum.....	50	52	48	54	51	55	57	73	75	75	67	67	63	62	65	72	67	75	84	86	71	61	74	73	94	88	95	80	76	58	68.9
	Minimum.....	33	30	29	30	29	39	38	38	40	46	57	51	40	37	37	47	49	44	52	62	48	38	47	55	49	48	61	48	46	51	43.6
Plainfield.....	Maximum.....	50	51	48	56	49	57	57	71	74	78	70	65	59	60	70	66	73	82	85	69	61	70	72	91	79	94	66	74	59	...	67.2
	Minimum.....	34	30	32	33	36	39	37	33	37	42	57	47	40	37	36	34	38	42	52	60	49	36	48	51	51	49	58	45	45	52	43.0
Somerville.....	Maximum.....	49	51	47	52	50	57	55	68	72	73	75	65	65	60	62	74	65	70	80	83	80	60	70	73	91	88	93	82	74	68	68.4
	Minimum.....	31	25	29	28	22	32	34	31	32	41	58	45	34	35	34	34	44	38	49	53	48	30	47	49	49	48	58	46	44	53	40.0
South Orange.....	Maximum.....	49	49	40	50	48	54	55	68	70	75	66	66	54	57	60	67	63	70	80	81	63	59	69	70	87	70	90	66	72	54	64.1
	Minimum.....	32	31	29	28	30	39	42	40	41	46	56	49	39	37	38	36	49	44	55	63	45	36	47	52	49	50	66	47	47	51	43.1
New York, N. Y.....	Maximum.....	48	49	42	50	48	52	54	67	66	69	64	63	52	58	60																



Scale of Shades.

- 0 to 2 inches.
- 2 to 4 inches.
- 4 to 6 inches.
- 6 to 8 inches.
- Over 8 inches.

Natural Miles
0 100 200 300 400
Kilometers
0 100 200 300 400

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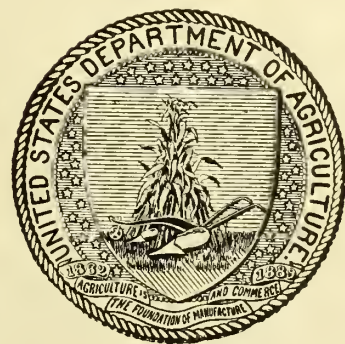
U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU
CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

MAY, 1915.

BY
G. HAROLD NOYES
SECTION DIRECTOR



TRENTON, N. J.
WEATHER BUREAU OFFICE
JUNE 19, 1915.

Departure of the Mean Temperature from the Normal, May, 1915.



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Section Director.

VOL. XXVIII. TRENTON, N. J., MAY, 1915. No. 5.

GENERAL SUMMARY.

Following a warm April, this month was remarkably cold and excepting those of 1885 and 1907, it was the coldest May on record. There was a period slightly above normal warmth from the 1st to 14th, and again on the 22nd, and 23d, but the remainder of the month was cool, the greatest deficiency in temperature being on the 30th. The growing season thus far has been deficient in rainfall, so that the lack of warmth has not had unusually serious effect on crop growth. As a rule, sunshine has been ample, there being more cloudy and more clear days, but less partly cloudy weather, than in previous years. In spite of the deficient temperature, the sunshine and moisture left crops in a distinctly better condition than at the same period last year and about the same or slightly better than normal. Practically all out-of-door pursuits were carried forward under ordinary favorable conditions. The warmest section of the State was to the southwestward of Burlington County, and the maximum rainfall occurred over Camden County. The highest temperature recorded was lower than the April maximum, and the lowest, 30°, occurred in the extreme northern Counties, and also at some of the cranberry bog surfaces. On the 20th a remarkably brilliant solar halo was observed from all parts of the State. The phenomenon doubtless presented various aspects from the several viewpoints, but as observed at Trenton, which is comparatively close to the center of the State, it was first noticed about 10.45 a. m., and from shortly after 11 o'clock to about 11.45 a. m., the greatest brilliance prevailed. Five circles were noted, the most prominent being one of 22° radius around the sun, displaying the well-known rainbow colors, with the red on the inner portion, and the blue on the outer side of the ring. Then there was a concentric circle of about 46° radius, similarly colored. Three circles, not quite complete, and slightly smaller than the 22° circle appeared as though they might pass through the sun, save for the blinding effect of the sun's light, and seemed to include the zenith. Toward 1.30 p. m., the cirro-stratus cloud which was the medium for the formation of the halo, became denser and the vision ceased. The sight of the halo was the basis for much comment by the general public, and also caused much apprehension. While scores of halos are doubtless visible each year, if diligently sought, yet it is seldom that one of such brilliancy is seen from this portion of the country. The mean daily stage of the Delaware River at Trenton was 2 feet, which was 0.6 foot below the 10 year average.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from the observations of 39 stations was 58.1°, which was 2.2° below normal. The warmest station was Bridgeton, and the coldest, Charlotteburg. The highest temperature was 88° at Bridgeton

and Vineland, and the lowest, 30°, at Charlotteburg and Culvers Lake. Sudden changes of temperature, such as would appear in large daily ranges, were comparatively rare, and this was an agreeable feature of the month.

PRECIPITATION.

The average precipitation of the State as deduced from the observations of 45 stations, was 3.82 inches, which was 0.03 inch below normal. The greatest monthly amount was 6.15 inches at Haddonfield, and the least, 2.00 inches at Asbury Park. There were scattered showers in some portion of the State on each of the first nine days of the month, and the other rainy days were the 12th, 13th, 16th, 17th, 21st to 26th, and 27th to 30th. The rain which fell during thunder showers was of slight importance. The average number of rainy days was 13, which was 2 above normal. The greatest amount of precipitation in 24 consecutive hours was 2.39 inches at Tuckerton on the 21st-22d.

WIND.

The prevailing wind direction was from the northwest, with an approximate velocity of 11 miles per hour. The highest velocity was 58 miles per hour from the northwest at Sandy Hook on the 26th.

SUNSHINE AND CLOUDINESS.

The average number of clear days for the month was 13; partly cloudy, 7; cloudy, 11; which was 1 day more clear, and 2 days more cloudy than normal. Sunshine averaged approximately 55% of the possible, and was somewhat greater in the northern counties.

MISCELLANEOUS.

Atmospheric pressure, reduced to sea level, averaged 29.92 inches, which was 0.07 inch below normal. Moderate frosts were reported as late as the 29th on the cranberry bogs. Thunderstorms occurred on the 4th, 5th, 8th, 9th, 16th, 21st, and 22nd. Dense fog occurred on the 21st and 22nd. Solar halos were observed on the 12th and 20th, and lunar halos, on the 23d.

COMPARATIVE DATA FOR MAY.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more prec.
1885.....	57.3	90	29	2.74	5.20	1.18	.....	.....	.....	.....
1886.....	58.8	87	36	6.07	8.46	4.15	.....	.....	.....	.....
1887.....	63.3	94	35	1.37	3.82	0.08	.....	.....	.....	.....
1888.....	58.6	90	26	4.92	6.48	3.00	.....	.....	18	16
1889.....	62.3	94	32	4.00	6.60	2.43	.....	.....	11	12
1890.....	60.7	87	33	4.24	7.17	2.60	.....	.....	11	12
1891.....	59.5	93	28	2.97	5.39	1.78	.....	9	11	9
1892.....	60.1	90	30	5.04	6.52	3.26	.....	8	13	10
1893.....	59.4	95	29	4.07	6.38	2.55	.....	13	8	10
1894.....	61.4	93	30	7.72	15.61	3.57	.....	11	9	11
1895.....	60.9	102	28	2.85	3.95	1.66	.....	12	12	7
1896.....	65.3	98	29	3.21	4.54	1.62	.....	10	12	9
1897.....	60.6	87	29	5.68	9.11	1.71	.....	11	12	8
1898.....	58.5	93	29	7.00	9.26	3.92	.....	8	8	15
1899.....	61.1	94	29	1.92	3.15	1.15	.....	12	12	7
1900.....	60.9	98	26	4.71	7.33	2.53	.....	13	7	11
1901.....	58.6	90	29	5.60	8.13	3.10	.....	9	7	14
1902.....	60.3	95	29	2.04	4.63	1.11	.....	15	11	5
1903.....	62.7	98	21	0.59	1.32	0.08	.....	17	9	5
1904.....	62.8	97	31	2.60	6.69	1.01	.....	16	10	5
1905.....	61.4	89	22	1.71	3.94	0.42	.....	10	10	11
1906.....	61.0	94	24	4.21	6.28	2.37	.....	16	8	7
1907.....	55.4	91	22	5.05	8.09	2.51	.....	12	9	10
1908.....	61.6	95	29	7.10	9.99	4.39	.....	9	10	12
1909.....	60.0	91	27	2.30	4.84	0.79	.....	10	11	10
1910.....	60.0	94	27	2.54	4.25	1.48	.....	10	10	11
1911.....	64.5	99	22	1.37	3.84	0.31	.....	14	11	6
1912.....	62.0	92	31	4.09	6.47	2.79	.....	11	11	9
1913.....	60.3	94	25	3.45	4.86	2.53	.....	15	7	9
1914.....	63.1	98	30	2.93	5.09	0.59	.....	14	9	7
1915.....	58.1	88	30	3.82	6.15	2.00	.....	13	7	11

Climatological data for May, 1915.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.							Precipitation, in inches.				No. of days.				Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation 40 in. or more.	Clear.	Pt. cloudy.	Cloudy.		Prevailing direction of wind.
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	24	57.6	-3.1	79	†11	33	2	39	3.53	-0.36	1.10	0	11	16	2	13	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	23	54.3	-3.0	78	31	30	16	45	3.46	-1.34	.....	0	12	16	10	5	nw.	George S. Briggs.
Culvers Lake††.....	Sussex.....	848	14	.....	.....	.....	.....	30	27	.....	3.32	-0.18	0.97	T.	12	18	4	9	se.	Brice E. Riker.
Dover.....	Morris.....	600	31	55.2	-3.4	79	11	35	†16	40	4.26	+0.12	1.36	0	12	.....	.....	.....	.....	William C. Harris.
Layton.....	Sussex.....	480	15	54.7	-3.2	79	†8	32	†15	40	3.47	+0.14	1.20	0	12	10	7	14	w.	A. M. Depue.
Newton.....	Sussex.....	678	35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Lloyd A. Voorhees.
Phillipsburg.....	Warren.....	363	33	58.6	-2.7	79	†11	38	27	38	3.77	-0.28	1.31	0	13	14	5	12	nw.	D. Wilson Smith.
Sussex.....	Sussex.....	442	25	55.2	-4.7	79	11	33	16	43	3.09	-0.82	1.11	0	9	14	3	14	nw.	George Dymock.
Means and extremes...				55.9	-3.4	79	†8	30	†16	45	3.56	-0.39	1.36	0	12	15	5	11	nw.	
<i>The Red Sandstone Plain.</i>																				
Bayonne.....	Hudson.....	50	25	58.6	-1.7	80	†8	41	27	32	3.70	+0.12	1.38	0	14	16	3	12	s.	Erskine R. Eadie.
Bergen Point††.....	Hudson.....	37	18	58.3	-1.4	80	†8	40	†27	35	3.88	-0.10	1.39	0	12	11	10	10	se.	William H. Mitchell.
Boonton.....	Morris.....	400	§25	56.0	.....	77	11	34	16	34	3.76	-0.49	1.03	0	11	18	6	7	nw.	J. W. Demmers.
Chatham.....	Morris.....	234	13	.....	.....	83	22	33	.....	.....	3.13	-0.79	0.95	0	13	18	3	10	.....	Miss M. A. Butler.
Elizabeth.....	Union.....	45	36	58.7	-3.5	83	22	33	27	41	3.35	-0.57	0.95	0	13	10	9	12	nw.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	27	58.8	-1.1	80	22	39	16	37	3.94	-0.35	1.31	0	16	14	8	9	w.	Hiram E. Deats.
Highwood.....	Bergen.....	90	26	55.8	-3.9	78	11	36	†15	40	3.72	-0.12	1.18	0	14	10	8	13	nw.	Charles J. Bates.
Jersey City.....	Hudson.....	10	16	59.6	-1.5	80	†11	41	27	33	4.04	+0.86	1.47	0	14	11	8	12	nw.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	28	59.7	-2.0	78	†8	41	27	35	3.89	-0.18	1.28	0	12	12	10	9	nw.	Samuel W. Cochran.
Little Falls.....	Passaic.....	180	§12	56.1	.....	78	11	35	27	39	3.75	-1.01	1.20	0	12	18	2	11	w.	Montclair Water Co.
Newark.....	Essex.....	159	73	59.0	-1.8	79	†8	41	27	33	3.28	-0.76	1.03	0	14	9	7	15	n.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	110	62	58.6	-2.0	81	9	40	20	35	3.87	-0.04	1.32	0	14	13	9	9	w.	N. J. Experiment Station.
Paterson.....	Passaic.....	80	44	59.7	-1.6	82	11	39	27	33	3.53	-0.96	1.12	0	16	8	13	10	nw.	Heber A. Probert.
Plainfield.....	Union.....	100	29	57.6	-2.7	80	22	39	†19	37	3.73	-0.10	1.28	0	13	9	10	12	nw.	John Neagle.
Pompton Plains.....	Morris.....	195	13	.....	.....	.....	.....	.....	.....	.....	3.20	-1.16	1.22	0	9	.....	.....	.....	.....	M. S. Taylor
Somerville.....	Somerset.....	60	33	57.0	-3.1	80	22	35	16	38	3.79	-0.33	1.37	0	13	12	8	11	nw.	A. A. Macdonald.
South Orange.....	Essex.....	200	45	57.8	-2.2	79	11	38	27	30	3.54	+0.08	1.23	0	12	13	8	10	w.	Dr. W. J. Chandler.
New York, N. Y.....		365	45	57.7	-1.6	76	22	41	27	26	3.23	+0.05	1.11	0	12	8	9	14	nw.	U. S. Weather Bureau.
Means and extremes...				58.1	-2.2	83	22	33	27	41	3.65	-0.35	1.47	0	13	13	7	11	nw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	34	61.6	-2.3	88	22	41	27	33	3.55	-0.38	1.08	0	10	14	4	13	ne.	Henry A. Jorden.
Burlington.....	Burlington.....	12	§29	58.0	.....	†77	8	40	27	†31	4.62	+0.39	1.22	0	15	17	5	9	nw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	23	59.7	-2.2	86	22	38	20	37	4.21	+0.95	1.68	0	14	11	13	7	.....	George L. Wilson.
Haddonfield.....	Camden.....	75	28	58.7	-3.0	81	22	38	27	33	6.15	+2.24	1.69	0	16	9	12	10	nw.	Prof. Chas. F. Richardson.
Hammononton.....	Atlantic.....	103	18	.....	.....	.....	.....	.....	.....	.....	5.21	+1.19	.....	0	15	.....	.....	.....	.....	H. J. Rolfe.
Hightstown.....	Mercer.....	140	23	58.0	-3.1	81	22	37	27	38	4.50	+0.68	1.31	0	14	16	7	8	w.	Chas. W. Dunbar.
Imlaystown.....	Monmouth.....	185	27	57.6	-1.6	82	22	39	20	*36	4.51	+0.62	1.20	0	12	.....	.....	.....	.....	H. E. Bullock.
Indian Mills.....	Burlington.....	76	26	59.3	-2.7	86	22	35	20	38	4.14	+0.10	0.65	0	14	11	11	9	nw.	James M. Armstrong.
Lakewood.....	Ocean.....	54	12	57.4	-2.8	85	22	34	16	35	3.90	-0.19	0.88	0	11	9	7	15	.....	R. W. Holman.
Moorestown.....	Burlington.....	75	53	60.0	-1.1	84	22	40	27	31	5.77	+1.74	1.50	0	14	11	11	9	nw.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	8	.....	.....	.....	.....	.....	.....	.....	3.66	.....	0.55	0	14	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	17	.....	.....	.....	.....	.....	.....	.....	3.66	+0.30	0.82	0	13	17	5	9	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	44	58.4	-2.7	79	22	42	27	30	4.33	+0.81	1.30	0	13	10	7	14	w.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	22	58.4	-1.3	82	8	38	†2	33	4.68	+1.25	2.39	0	13	13	8	10	.....	Frank R. Austin.
Vineland††.....	Cumberland.....	87	47	60.6	-1.6	86	22	40	†20	32	3.48	-0.29	0.54	0	14	.....	.....	.....	.....	E. V. C. Hendricks.
Woodbine.....	Cape May.....	43	24	*60.4	0.0	88	23	*41	27	36	3.74	-0.16	1.00	0	13	17	6	8	.....	Baron de Hirsch Agr. Sch.
Philadelphia, Pa.....		117	45	60.8	-1.4	81	22	44	27	25	4.12	+0.92	0.83	0	13	10	5	16	nw.	U. S. Weather Bureau.
Means and extremes...				59.1	-2.3	88	†22	34	16	38	4.38	+0.62	2.39	0	13	13	8	10	nw.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	26	58.1	-0.6	78	22	43	†2	25	2.00	-1.71	0.74	0	10	13	7	11	w.	Wilbur H. Pancoast.
Atlantic City.....	Atlantic.....	16	42	58.1	+0.6	79	23	44	27	24	3.21	+0.21	0.90	0	12	6	11	14	sw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	31	59.0	+0.4	79	23	43	27	20	3.33	+0.34	0.87	0	13	9	14	8	s.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	8	57.0	.....	77	13	42	†19	29	3.20	.....	0.75	0	14	12	3	16	w.	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	17	58.0	-0.8	77	22	46	1	24	3.15	-0.83	0.92	0	14	11	8	12	w.	U. S. Weather Bureau.
Means and extremes...				58.0	-0.1	79	23	42	†19	29	2.98	-0.50	0.92	0	13	10	9	12	w.	
For the State.....				58.1	-2.2	88	†22	30	†16	45	3.82	-0.03	2.39	0	13	13	7	11	nw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

* Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville, Bergen Point is Bayonne, Vineland, is South Vineland.

Daily precipitation for May, 1915.

Stations.	Day of month.																															Total.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>The Highlands and Kittatinny Valley.</i>																																	
Albion				.28	.26			*					.58			.16	.22				.38	1.10		.19		.27				.09		3.53	
Aspenburg				.58	.10				.23				.43								*	1.37		.33		.11						3.46	
Beverly Lake	T.			.01	.29		T.	.20				.01	.36			.08	.37	T.			.48	.97	.04	.38	T.		.13			T.		3.32	
Conover				.72			.22						.04				.36				*	1.39		.28		.14				.11		4.26	
Easton	.07			.07	.19		T.	.21				.08	.29			.11	.36					.26	1.20		.41		.22					3.47	
Easton	T.			.17	.42		T.	.04				T.	.57			.07	.17					.62	1.19	.04	.20	.01	.11				.16		3.77
Easton				.21	.18			.25				.30					.29					.29	1.11		.33		.13					3.09	
<i>The Red Sandstone Plain.</i>																																	
Aspenburg	T.			.06	.31				.09			.17	1.10			.10	.18	.01			.38	1.00	.04	.19	T.	.01				.06		3.70	
Aspenburg	T.	T.		.08	.37				.10			.30	1.09			.10	.18	.01			.40	1.24	.03			*			.08			3.88	
Aspenburg				.01	.75			.07					1.03				.27		T.		.23	.86	.14		.24		.10			.06		3.76	
Aspenburg	.05	.03		.53				.04	.03				.95				.32	.08			.05	.52	.12	.03	.30						.08	3.13	
Aspenburg	T.			.10	.39		T.	.03	.05			*	.95			.11	.17				.43	.82		.19		.02				.09		3.35	
Aspenburg				.19	.53	.01	.02	.07	T.			.04	.47			.06	.17			T.	.47	1.31	.04	.26	.03	.07				.20		3.94	
Aspenburg		.04		.03	.45		T.	.05				.23	.95			.10	.12	.10		T.	.36	1.02	.04	.16		.07						3.72	
Aspenburg		.02	T.	.32	.17			.03	.06			.87	.31			.12	.15			T.	.47	1.29		.18		.01				.04		4.04	
Aspenburg				.29	.51			.04	.07			.04	.58			.17	.18				.44	1.28		.24		.05				T.		3.89	
Aspenburg			T.	.52	.20							1.02	.18			.12	.15	T.		T.	.91	.40		.15		.05				.03		3.75	
Aspenburg	T.			.45	.10		T.	.02	.03			.81	.22			.11	.15	T.		.09	.71	.45		.11		.01				.02		3.28	
Aspenburg	T.			.19	.38	T.		.03	.09			.06	.78			.02	.24				.35	1.32	.07	.16	.02	.03				.16		3.57	
Aspenburg	.04			.07	.48	.01	T.	.03				.05	1.07			.10	.10	.02			.38	.82	.05	.21		.09				.01		3.53	
Aspenburg		.01		.30	.26		T.	.05				.30	.37			.10	.18			T.	.45	1.28		.21		.07				.15		3.73	
Aspenburg	.03			.48			.06						.71				.13	.07				.13	1.22		.27		.10			T.		3.20	
Aspenburg				.20	.42		T.		.03			.14	.48			.09	.16				.33	1.37	.04	.20		.06				.27		3.79	
Aspenburg		T.		.06	.50	T.	T.	.05	T.			.50	.73			.10	.12	T.			.44	.89		.08		.02				.05		3.54	
Aspenburg		T.	T.	.31	.11	.01	T.	T.	.02			.86	.25			.12	.17			T.	.44	.75		.15		T.				.04		3.23	
<i>The Southern Interior.</i>																																	
Aspenburg				.50			T.		.18			*	.38			.18					.42	*	1.08	.44		.27				.10		3.55	
Aspenburg				.51	.48			*	.20			.58	.28			*	.20			T.	.61	1.22	.13	.10		.05				.24	.02	4.02	
Aspenburg					.45			.38				.42	.03			.09	.09					1.68	.32	.16	.02	.11				.07	.39	4.21	
Aspenburg		.01		.41	.64		T.		1.69			.60	.11			.05	.17				.67	1.01	.01	.40	.01	.02				.02	.33	6.15	
Aspenburg				.11	.62			.43				.58				.13	.72				*	2.00	*	*	*	*			*	.45	.17	5.21	
Aspenburg				.34	.60			.08	.13			.11	.66			.08	.17				.47	1.31	.07	.18		.15				.15		4.50	
Aspenburg				.32	.50			.45				.10	.60			.05	.20				.50	1.20	.20	.15	T.	T.				.24		4.51	
Aspenburg				.16	.51		T.	.27				.33	.20			.09	.08				.65	.60	.43	.34		.04				.04		4.14	
Aspenburg				.18	.41		T.	.50				.55	T.			.05	.14				.55	.88	.27	.15	T.				T.	.22		3.90	
Aspenburg				.39	.69			.64				.36	.42			.07	.26				.70	1.50	.15	.17	.02	.06				.34		5.77	
Aspenburg				.05	.30			.35				.14	.20			.23	.01				.55	.52	.46	.37		.40				.05	.03	3.66	
Aspenburg				.08	.41			.22				.28	.07			.20	T.				.75	.82	.26	.44		.06				.04	.03	3.66	
Aspenburg	T.		.03	.98	T.		T.	.15				.76	.03			.07	.15			.01	.81	1.04	T.	.09		.08			T.	.13		4.33	
Aspenburg				.12	.35			.46				.22	.24			.04	.05				1.05	1.34	.26	.30		T.				.10	.15	4.68	
Aspenburg				.05	.33		T.	.27				.45	.09			.17	.02	T.		T.	.48	.50	.49	.26		.33				.03	.01	3.48	
Aspenburg				.15	.23			.20				.30	.12			*	.32				.40	.05	1.00	.47		.40				.10		3.74	
Aspenburg		.17		.62			T.	.36				.71	.06			.05	.15			.02	.72	.75		.22		.01				T.	.28	4.12	
<i>The Sea Coast.</i>																																	
Aspenburg			T.	.22			T.	.29	.03			.36	.11			T.	.08				.12	.74		.04		T.				.01		2.00	
Aspenburg			.06					T.	.13			.35	T.			.20	T.			T.	.56	.89	.01	.39		.21				.07	.02	3.21	
Aspenburg		.10		.77			T.					.25	.02			.52	T.				.10	.31	.20	.37		.27				.35	.01	3.35	
Aspenburg				.51	.12		T.	.29	.03			.70	.05			.13	.14				.36	.61		.10	.01	.01				.14		3.20	
Aspenburg				.46	.04		T.	.12	.02			.85	.07			.09	.14				.38	.81	.01	.08		.01				.07		3.15	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24 hour period, midnight to midnight.

|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.

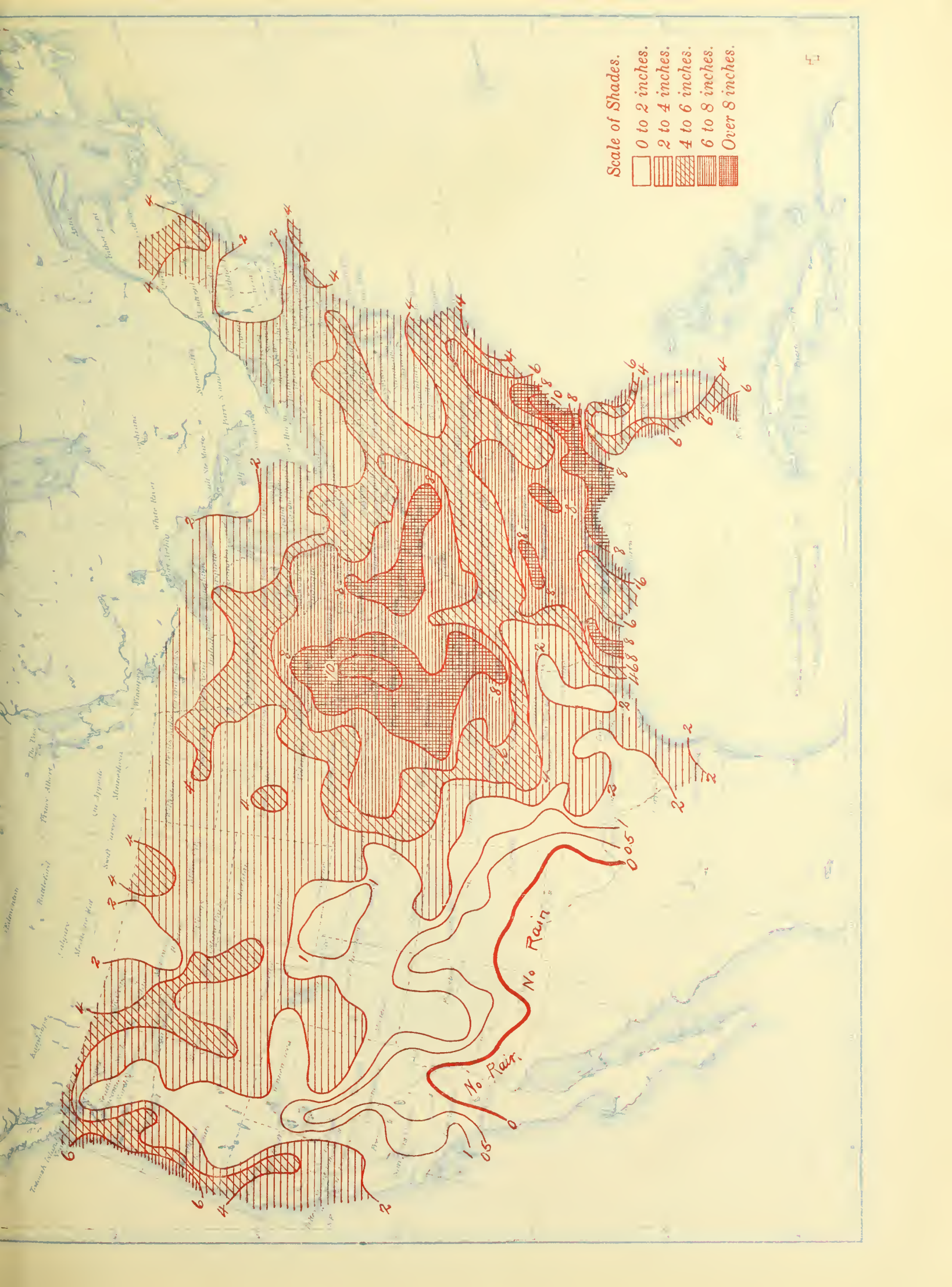
* Precipitation included in the next following measurement. **Precipitation for 24 hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.				Moisture.		Sun. shine.
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m	Percentage of possible sunshine.
							Miles per hour.	Direction.	Date.			
Antie City.....	29.95	30.36	11	29.39	4	s	29	s.	7	74	76	59
ury Park.....	29.92	30.38	11	29.44	4							
e May.....		30.37	11	29.43	4							
ey City.....	29.91	30.32	11	29.45	5							
g Branch.....	29.93	30.34	11	29.40	4	12	50	nw.	26	72	66	57
ark.....	29.92						45	n.	26	70	65	
York, N. Y.....	29.91	30.31	11	29.45	5	15	57	nw.	21	65	60	55
adelphia, Pa.....	29.94	30.35	11	29.42	4	10	40	n.	26	74	64	52
ly Hook.....	29.91	30.35	11	29.44	5	13	58	nw.	26	94	93	53
nton.....	29.92	30.32	11	29.43	4	10	37	w.	9	71	62	53

Stations.

a, b, c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.



Scale of Shades.

0 to 2 inches.

2 to 4 inches.

4 to 6 inches.

6 to 8 inches.

Over 8 inches.

UNIVERSITY OF ILLINOIS
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U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU

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CLIMATOLOGICAL DATA

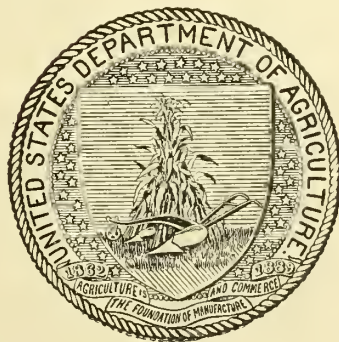
NEW JERSEY SECTION

JUNE, 1915.

BY

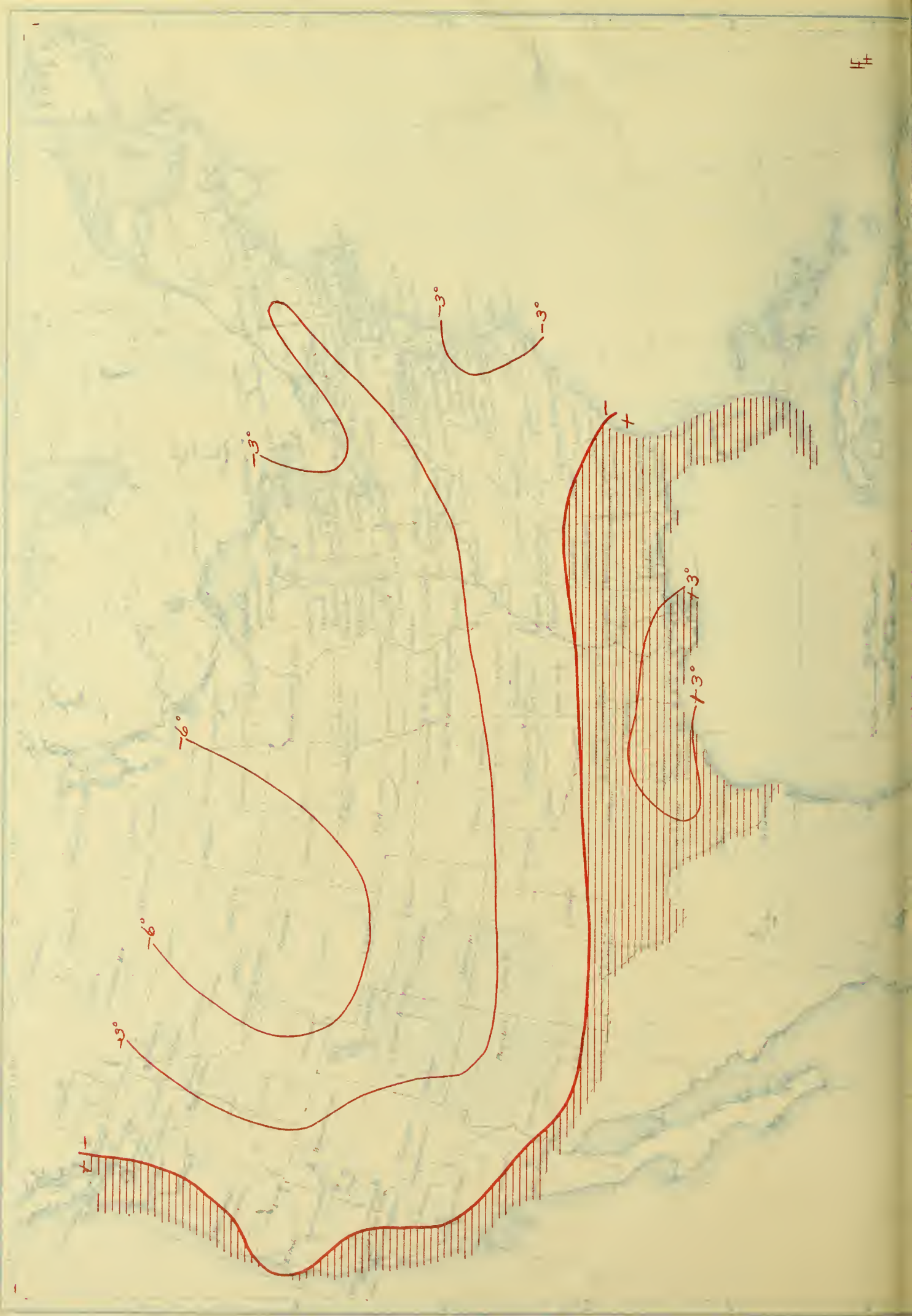
G. HAROLD NOYES

SECTION DIRECTOR



TRENTON, N. J.
WEATHER BUREAU OFFICE
JULY 19, 1915.

Departure of the Mean Temperature from the Normal, June, 1915.



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Section Director.

L. XXVIII. TRENTON, N. J., JUNE, 1915. No. 6.

GENERAL SUMMARY.

There was much unpleasant weather during the month owing to the slightly greater number of rainy days than usually occur, and to many hours of northeast winds. Low temperatures continued from May to about the 11th of June and then rose considerably above the normal and remained high until the 20th. The remainder of the month was cool. The warmest days were the 14th and 15th, with maxima above ninety in many instances. The abrupt change from below to above normal temperature created a feeling of severe heat, which was in reality a matter of personal impression due to contrast, rather than to actual heat. The coldest days occurred on the 3d and 24th.

The weather has been such as to aid plant growth, except that greater heat would have been better. Various forms of insect life have suffered from insect enemies that have also been favored by the cool, moist weather. Fire blight on apples and pears has appeared over nearly the whole State, being worse in the south than the north. Caterpillars of various kinds, cranberry insects and potato bugs were more than ordinarily troublesome. Practically all of this insect life has been favored by the prevailing weather conditions.

The warmest regions of the State were portions of the Delaware and Passaic valleys, and western sections of Cumberland, Essex and Gloucester counties, and the coolest, the seashore and the most northern counties. The frequency of occurrence of showers was comparatively uniform, but amounts varied considerably, as is usually the case in the season of thunder showers.

The mean stage of the Delaware River at Phillipsburg was 1.2 feet; at Trenton, 1.1 feet, which was the lowest June mean in 10 years, and 0.9 foot below the 10 years' normal.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from the observations of 39 stations, was 67.0°, which was 2.3° below normal. The warmest station was Bridgeton, and the coldest, Asbury Park. The highest temperature in the State was 98° at Elizabeth on the 14th, and the lowest, 36° at Culvers Lake on the 3d. The greatest daily range of temperature was 62° at Sussex on the 1st.

PRECIPITATION.

The average precipitation of the State, as deduced from the observations of 44 stations, was 3.12 inches, which was 0.72 inch below normal. The greatest monthly amount was 6.51 inches at Woodbine, and the least, 1.40 inches at Asbury Park. In the northern half of the State, there were copious showers on the 2d

and 3d. Over the whole State there were light scattered showers on the 6th, 7th and 8th. It rained nearly every day from the 12 to 17th, inclusive, followed by scattered showers from the 18th to 20th. Showers of considerable amounts occurred on the 22d, 23d, 26th, 27th, 28th and 30th. Most of the rain came with thundershowers. Hail occurred in some sections on the 15th, more generally on the 17th and 22d, and in nearly all localities on the 26th and 27th. The greatest amount of precipitation in 24 consecutive hours was 2.22 inches at Sandy Hook. The average number of rainy days was 11, which was 2 above normal.

WIND.

The prevailing wind direction was from the south, but was nearly equalled by northeast, with an approximate hourly velocity of 11 miles. The highest velocity was 74 miles per hour from the northeast on the 2d at Long Branch.

SUNSHINE AND CLOUDINESS.

The average number of clear days for the month was 13; partly cloudy, 10; cloudy, 7; which was 1 day more clear, and 1 day less partly cloudy than normal. Sunshine averaged approximately 59% of the possible and was of fairly uniform distribution.

MISCELLANEOUS.

Atmospheric pressure, reduced to sea level, averaged 30.01 inches, which was 0.03 inch above normal. Thunder storms occurred on from 7 to 9 days. Hail stones of the 17th and 22d were from one half to three fourth inch and did some damage. There were six days with dense fog along the coast between the 7th and 27th. Solar halos were observed on the 1st, 5th, 11th, 21st, 24th, 25th, 29th and 30th; lunar halos on the 20th and 22d. The aurora was observed in some of the northern portions of the State on the 12th.

COMPARATIVE DATA FOR JUNE.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more prec.
1885.....	68.7	97	39	1.79	3.37	0.72	.....	.....	.....	.....
1886.....	67.1	91	41	3.38	5.79	2.22	.....	.....	.....	.....
1887.....	68.2	97	42	6.77	10.29	4.21	.....	.....	9	10
1888.....	70.8	99	39	2.59	5.69	1.67	.....	.....	5	6
1889.....	69.9	91	40	3.73	6.75	2.39	.....	.....	10	10
1890.....	70.7	95	42	3.59	5.16	0.99	11	13	6	7
1891.....	69.7	102	38	2.02	6.71	1.24	14	9	7	5
1892.....	72.4	98	44	3.85	6.12	1.58	10	12	8	11
1893.....	69.7	103	40	2.95	7.02	0.46	10	11	9	8
1894.....	70.6	102	35	2.28	5.90	0.99	14	11	5	9
1895.....	71.7	103	39	3.24	5.99	0.98	11	11	8	10
1896.....	68.1	96	37	5.46	13.45	2.64	12	10	8	10
1897.....	66.1	95	35	3.38	5.50	2.12	10	13	7	10
1898.....	70.1	100	38	2.10	3.54	1.13	14	12	4	8
1899.....	72.3	103	38	2.50	4.34	1.01	15	10	5	7
1900.....	70.4	97	33	3.08	4.91	1.10	12	12	6	8
1901.....	70.0	103	95	1.57	4.36	0.73	18	8	4	5
1902.....	67.5	99	37	6.57	10.21	4.54	14	11	5	11
1903.....	64.0	92	37	7.68	15.02	2.39	6	10	14	15
1904.....	68.6	100	34	3.13	5.44	1.91	13	10	7	12
1905.....	68.3	96	35	3.43	8.71	1.67	11	12	7	10
1906.....	70.4	98	38	4.48	9.18	1.45	11	11	8	12
1907.....	64.7	96	31	4.41	6.85	3.15	12	10	8	10
1908.....	69.9	99	35	2.32	4.63	0.77	16	12	2	4
1909.....	70.0	99	36	3.26	5.70	1.71	9	10	11	12
1910.....	66.9	95	34	5.17	8.01	2.66	9	10	11	13
1911.....	68.9	97	40	5.36	10.11	2.84	9	12	9	14
1912.....	68.0	98	33	1.94	3.61	0.91	9	12	9	8
1913.....	69.1	98	31	1.80	3.76	0.68	19	8	3	5
1914.....	68.5	98	35	2.66	4.85	1.09	16	9	6	7
1915.....	67.0	95	36	3.12	6.51	1.40	13	10	7	11

Climatological data for June, 1915.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.							Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation 40 in. or more.	Clear.	Pt. cloudy.	Cloudy.		
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	24	67.6	-1.4	88	†14	42	2	40	1.87	-2.53	0.63	0	10	21	5	4	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	23	63.8	-1.7	90	14	37	1	39	2.64	-1.62	1.00	0	8	21	7	2	nw.	George S. Briggs.
Culvers Lake†.....	Sussex.....	848	14	.....	.....	.....	.....	36	3	.....	2.00	-1.84	0.64	0	11	18	8	4	n.	Brice E. Riker.
Dover.....	Morris.....	600	31	*65.4	-1.8	92	14	41	1	37	2.10	-2.02	0.60	0	11	.....	.....	.....	.....	William C. Harris.
Layton.....	Sussex.....	480	15	65.1	-1.2	89	14	41	†5	36	2.93	-0.49	1.09	0	11	16	5	9	nw.	A. M. Depue.
Newton.....	Sussex.....	678	35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Lloyd A. Voorhees.
Phillipsburg.....	Warren.....	363	33	68.8	-0.9	92	15	45	3	35	2.20	-1.95	0.60	0	10	19	5	6	s.	D. Wilson Smith.
Sussex.....	Sussex.....	442	25	65.3	-2.3	88	14	37	1	44	2.00	-1.73	.....	0	8	19	2	9	nw.	George Dymock.
Means and extremes...				66.0	-1.6	92	†14	36	3	44	2.25	-1.74	1.09	0	10	19	5	6	nw.	
<i>The Red Sandstone Plain.</i>																				
Bayonne.....	Hudson.....	50	25	67.4	-2.3	89	12	47	3	30	2.81	-0.83	1.65	0	12	14	10	6	s.	Erskine R. Eadie.
Bergen Point†.....	Hudson.....	37	18	66.6	-2.2	89	14	46	3	30	3.32	-0.63	1.30	0	11	5	23	2	se.	William H. Mitchell.
Boonton.....	Morris.....	400	25	66.0	.....	91	14	42	1	39	2.72	-1.02	1.02	0	13	17	7	6	ne.	J. W. Demmers.
Chatham.....	Morris.....	234	13	.....	.....	.....	.....	.....	.....	.....	2.30	-1.74	1.10	0	11	.....	.....	.....	.....	Miss M. A. Butler.
Elizabeth.....	Union.....	45	36	68.4	-2.8	95	14	43	1	39	3.69	+0.05	1.87	0	14	9	14	7	e.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	27	68.1	-1.0	92	14	45	1	35	2.67	-1.76	1.06	0	11	15	11	4	s.	Hiram E. Deats.
Highwood.....	Bergen.....	90	26	65.6	-2.7	89	14	37	1	41	2.93	-0.85	1.24	0	8	7	15	8	s.	Charles J. Bates.
Jersey City.....	Hudson.....	10	16	69.4	-0.6	90	14	48	3	29	4.76	+1.46	2.05	0	11	8	13	9	se.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	28	68.7	-1.6	88	15	47	†1	30	2.55	-1.73	0.75	0	9	11	15	4	sw.	Samuel W. Cochran.
Little Falls.....	Passaic.....	180	§12	67.2	.....	93	14	43	1	36	4.06	-0.22	1.90	0	10	.....	.....	.....	e.	Montclair Water Co.
Newark.....	Essex.....	159	73	68.2	-1.5	93	14	46	3	29	3.61	-0.02	1.52	0	10	11	7	12	e.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	110	62	67.4	-2.2	90	14	46	3	30	2.66	-1.11	1.69	0	10	16	11	3	ne.	N. J. Experiment Station.
Paterson.....	Passaic.....	80	44	68.8	-1.3	93	14	46	3	33	2.18	-2.14	0.64	0	10	5	22	3	sw.	Heber A. Probert.
Plainfield.....	Union.....	100	29	67.0	-2.3	90	14	44	1	34	3.88	-0.25	1.33	0	13	9	15	6	ne.	John Neagle.
Pompton Plains.....	Morris.....	195	13	.....	.....	.....	.....	.....	.....	.....	1.92	-2.24	0.51	0	9	.....	.....	.....	.....	M. S. Taylor
Somerville.....	Somerset.....	60	33	66.6	-2.6	90	14	41	1	37	1.54	-2.61	0.50	0	6	13	13	4	nw.	A. A. Macdonald.
South Orange.....	Essex.....	200	45	67.3	-1.5	89	14	46	3	28	2.77	-0.79	0.92	0	11	9	7	14	ne.	Dr. W. J. Chandler.
New York, N. Y.....	.....	365	45	66.6	-1.9	89	14	46	3	27	3.66	+0.40	1.63	0	12	8	7	15	ne.	U. S. Weather Bureau.
Means and extremes...				67.5	-1.9	95	14	37	1	41	2.96	-0.96	2.05	0	11	11	13	6	ne.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	34	69.2	-4.2	91	15	45	1	29	5.88	+2.11	1.80	0	13	13	10	7	ne.	Henry A. Jorden.
Burlington.....	Burlington.....	12	§29	67.9	.....	91	15	45	1	33	3.20	-0.72	0.93	0	11	19	5	6	nw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	23	*67.4	-4.0	90	15	41	1	37	4.58	+1.18	1.25	0	12	.....	.....	.....	.....	George L. Wilson.
Haddonfield.....	Camden.....	75	28	67.8	-2.9	89	†14	44	1	33	3.15	-0.46	1.06	0	11	7	15	8	ne.	Prof. Chas. F. Richardson.
Hammononton.....	Atlantic.....	103	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. J. Rolfe.
Hightstown.....	Mercer.....	140	23	67.4	-2.0	91	15	43	1	39	1.57	-2.44	0.56	0	11	20	4	6	w.	Chas. W. Dunbar.
Imlaystown.....	Monmouth.....	185	27	*67.8	-3.0	92	14	46	25	36	2.10	-1.88	0.40	0	13	.....	.....	.....	.....	H. E. Bullock.
Indian Mills.....	Burlington.....	76	26	67.1	-3.9	92	14	37	1	40	3.66	-0.13	0.57	0	11	9	15	6	e.	James M. Armstrong.
Lakewood.....	Ocean.....	54	12	65.6	-2.7	91	14	41	1	35	3.27	-0.93	1.60	0	11	8	11	11	ne.	R. W. Holman.
Moorestown.....	Burlington.....	75	53	68.2	-2.0	89	†15	46	1	30	4.11	+0.31	1.69	0	11	11	15	4	nw.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	8	.....	.....	.....	.....	.....	.....	.....	3.32	.....	0.73	0	15	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	17	.....	.....	.....	.....	.....	.....	.....	5.25	+1.48	1.50	0	15	16	9	5	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	44	67.8	-1.7	89	15	46	3	26	2.07	-1.42	0.48	0	11	6	10	14	ne.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	22	67.7	-1.3	88	†14	38	1	32	4.30	+0.53	1.12	0	17	11	16	3	se.	Frank R. Austin.
Vineland †.....	Cumberland.....	87	47	68.0	-3.6	91	14	42	1	32	3.92	+0.34	0.96	0	11	.....	.....	.....	.....	E. V. C. Hendricks.
Woodbine.....	Cape May.....	43	24	66.9	-2.1	88	†14	39	1	31	6.51	+3.01	1.34	0	15	24	2	4	s.	Baron de Hirsch Agr. Sch.
Philadelphia, Pa.....	.....	117	45	69.6	-1.6	89	15	48	3	22	3.45	+0.15	0.90	0	8	8	14	8	ne.	U. S. Weather Bureau.
Means and extremes...				67.6	-2.8	92	14	37	1	40	3.79	+0.07	1.80	0	13	13	10	7	ne.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	26	63.6	-4.6	83	12	48	1	25	1.40	-2.40	0.48	0	15	9	6	15	ne.	Wilbur H. Pancoast.
Atlantic City.....	Atlantic.....	16	42	64.6	-2.2	80	14	51	1	23	2.40	-0.63	0.65	0	13	9	8	13	s.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	31	65.6	-2.1	85	14	50	1	23	3.84	+0.80	1.95	0	12	13	10	7	s.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	8	64.6	.....	87	12	46	1	26	2.84	.....	1.03	0	11	8	9	13	s.	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	17	65.6	-2.8	85	12	48	3	23	3.62	-0.35	2.22	0	13	8	10	12	s.	U. S. Weather Bureau.
Means and extremes...				64.8	-2.9	87	12	46	1	26	2.82	-0.64	2.22	0	13	9	9	12	s.	
For the State.....				67.0	-2.3	95	14	36	3	44	3.12	-0.72	2.22	0	11	13	10	7	s.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

* Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

† Post-office address as follows.—Culvers Lake is Branchville, Bergen Point is Bayonne, Vineland, is South Vineland.

Daily precipitation for June, 1915.

[illegible]

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station: precipitation is for 24 hour period, midnight to midnight.

|| Precipitation measured in the morning: amount then recorded is for the preceding 24 hours. § Incomplete or missing.

* Precipitation included in the next following measurement. ** Precipitation for 24 hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

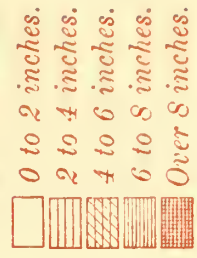
Stations.	Pressure.					Wind.				Moisture.		Sun. shine.
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m	Percentage of possible sunshine
							Miles per hour.	Direction.	Date.			
Atlantic City.....	30.03	30.29	28	29.73	22	9	32	ne.	3	83	53	65
Asbury Park.....	30.01	30.28	28	29.72	23							
Cape May.....		30.30	28	29.78	22	8	28	ne.	2			
Jersey City.....	30.03	30.28	28	29.68	23							61
Long Branch.....	30.02	30.26	28	29.68	23	13	74	ne.		79	76	60
Newark.....	29.98	30.20	28	29.76	22		60	e.	2	*60	*60	
New York, N. Y.....	30.01	30.26	28	29.67	23	13	60	e.	27	73	66	61
Philadelphia, Pa.....	30.02	30.28	28	29.71	22	10	31	ne.	27	71	70	60
Sandy Hook.....	30.01	30.28	28	29.69	23	13	56		27	91	89	52
Strenton.....	30.00	30.27	28	29.70	22	11	37	ne.	3	77	68	60

* 7 A. M. and * 9 P. M.

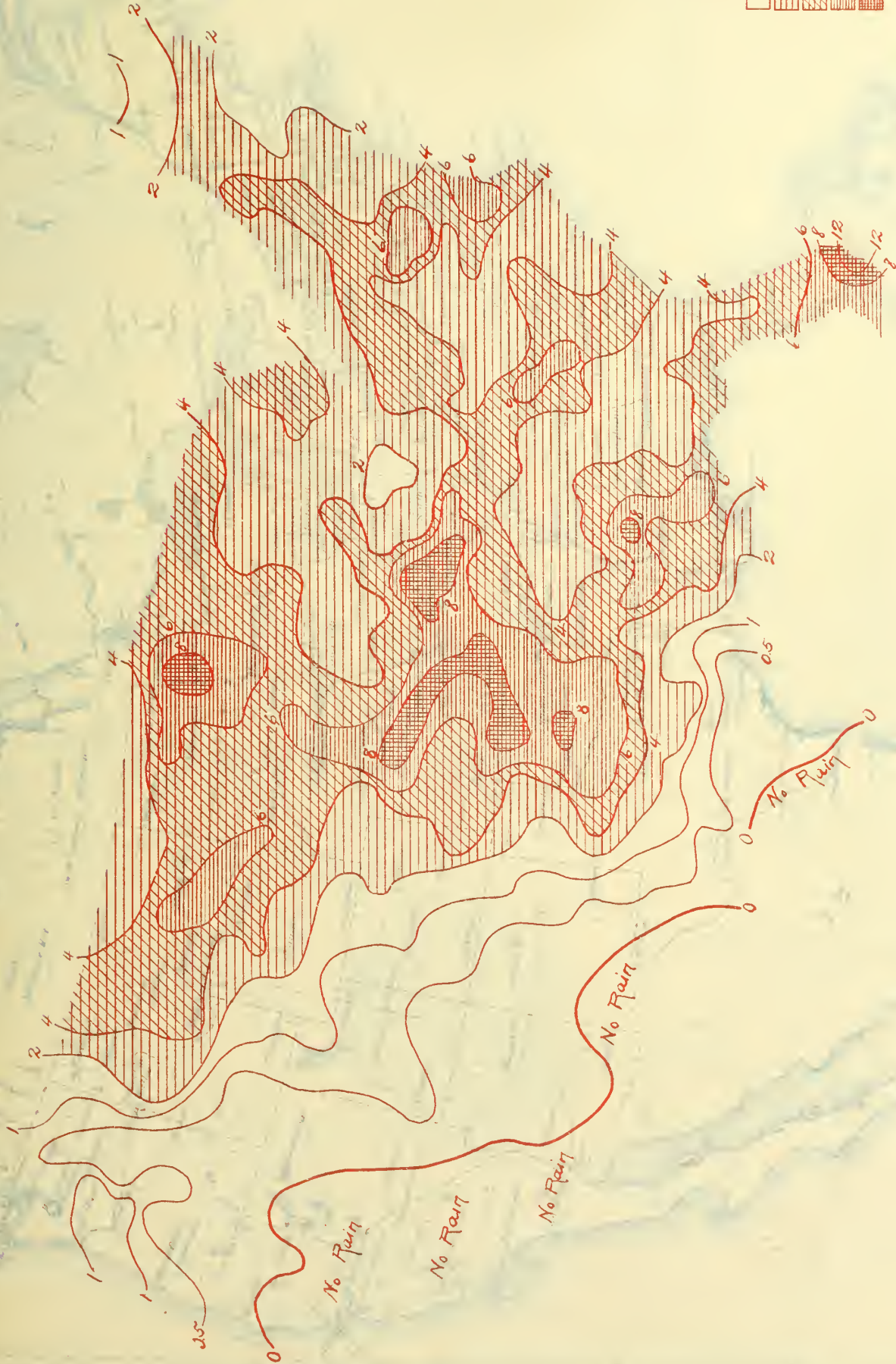
Daily temperature for June, 1915.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mea
<i>The Highlands and Kittatinny Valley.</i>																																
Belyidere.....	Maximum	80	70	64	76	75	80	80	80	77	82	82	87	88	87	79	88	86	86	82	79	74	67	74	80	80	83	82	84	81	79	79
	Minimum	46	42	46	49	49	55	64	64	49	52	54	63	57	60	65	64	65	62	68	67	62	57	54	46	46	55	53	47	44	54	..
Charlotteburg.....	Maximum	76	70	61	71	75	74	77	77	79	76	78	79	80	90	85	75	80	82	81	80	76	74	70	73	78	79	79	82	83	81	..
	Minimum	37	40	42	45	42	40	60	59	49	44	60	46	61	56	63	62	53	63	61	52	44	50	46	41	50	42	44	46	57	57	
Dover.....	Maximum	78	64	61	71	72	77	77	80	83	77	80	86	80	92	77	81	82	84	77	75	63	65	71	79	78	80	81	82	78	77	
	Minimum	41	..	43	47	46	52	61	58	51	52	49	56	52	63	61	65	64	59	67	61	50	51	56	49	43	54	50	46	..	..	
Layton.....	Maximum	78	68	61	75	77	79	82	79	80	75	79	82	83	89	80	79	80	83	78	78	67	59	71	76	81	80	82	81	78	77	
	Minimum	42	45	44	43	41	51	62	61	44	51	48	61	50	66	58	62	66	60	63	63	50	53	50	52	41	50	46	49	63	..	
Newton.....	Maximum	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
	Minimum	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Phillipsburg.....	Maximum	81	73	62	76	76	79	82	80	80	77	83	87	87	91	92	80	86	89	86	84	80	76	65	76	82	81	84	83	86	83	
	Minimum	46	52	45	49	50	56	63	63	52	53	54	63	57	65	66	64	66	61	68	67	53	57	52	50	47	55	56	57	54	63	
Sussex.....	Maximum	81	70	64	74	78	77	82	78	80	75	79	80	81	88	81	78	82	85	83	78	78	65	60	69	78	80	81	82	84	79	
	Minimum	37	47	43	44	45	54	61	62	42	52	49	61	53	65	62	63	59	57	63	62	50	51	52	52	43	53	48	42	53	62	
<i>The Red Sandstone Plain.</i>																																
Bayonne.....	Maximum	75	67	62	73	75	76	..	82	85	78	78	89	75	87	74	76	76	80	79	78	79	69	67	75	79	78	79	82	83	78	
	Minimum	50	52	47	50	57	60	58	58	55	57	56	65	59	62	64	66	62	62	63	61	57	59	55	53	53	60	57	52	60	64	
Bergen Point.....	Maximum	79	68	63	69	71	75	75	79	81	76	77	86	76	89	76	76	84	81	79	77	75	67	68	74	79	76	80	80	82	79	
	Minimum	49	50	46	49	53	57	59	57	56	56	57	64	59	61	64	64	61	61	63	64	57	55	53	51	49	59	59	55	58	61	
Boonton.....	Maximum	71	70	64	73	73	78	79	79	81	78	77	84	82	91	85	79	82	86	84	81	76	74	64	71	79	78	82	84	81	81	
	Minimum	42	46	45	49	47	53	62	60	50	56	50	60	52	..	62	65	65	62	65	53	50	52	52	44	54	58	45	51	58	..	
Elizabeth.....	Maximum	82	67	64	73	73	79	81	86	86	82	85	91	83	95	84	80	84	86	87	84	81	71	69	79	84	80	83	86	86	83	
	Minimum	43	48	46	51	49	56	61	58	51	53	52	64	56	61	60	68	64	60	66	66	55	53	53	49	51	56	55	47	55	60	
Flemington.....	Maximum	79	67	61	72	71	75	79	80	81	79	82	85	82	92	89	79	84	88	85	80	78	73	66	75	81	78	83	85	83	82	
	Minimum	45	52	46	52	51	58	62	61	55	54	51	62	59	64	67	68	67	62	67	67	55	55	54	50	48	56	58	50	55	61	
Highwood.....	Maximum	78	67	62	68	68	73	77	75	83	79	78	85	78	89	77	77	80	84	80	75	76	66	66	74	79	76	78	80	83	78	
	Minimum	37	46	46	48	49	57	62	61	50	53	52	63	54	61	65	65	64	60	66	63	56	51	52	51	45	55	51	46	55	63	
Jersey City.....	Maximum	79	70	64	71	72	76	78	82	83	80	76	89	82	90	78	80	82	86	83	81	80	71	69	77	80	79	79	83	84	79	
	Minimum	58	55	48	51	56	59	60	60	58	59	60	66	65	63	67	67	64	65	66	64	59	61	56	54	55	59	58	54	64	66	
Lambertville.....	Maximum	77	72	60	72	72	75	77	78	78	76	79	83	84	87	88	82	83	85	83	82	81	78	66	73	78	76	82	80	83	82	
	Minimum	47	56	47	52	52	57	64	62	55	56	54	64	62	66	70	69	65	65	66	69	58	60	55	53	52	58	59	53	58	66	
Little Falls.....	Maximum	78	71	66	77	76	80	82	80	82	72	83	86	84	93	83	82	83	85	83	78	71	68	72	81	80	84	83	84	85	79	
	Minimum	43	47	45	48	49	57	60	56	52	57	53	56	54	63	63	65	61	58	66	59	58	52	52	50	45	55	51	48	54	61	
Newark.....	Maximum	79	66	60	70	71	76	79	82	83	79	81	87	80	93	75	78	80	85	82	81	78	66	66	73	80	79	83	84	85	79	
	Minimum	52	51	46	49	54	57	61	59	58	57	59	65	61	64	66	64	63	62	65	65	58	59	55	54	56	59	57	55	64	59	
New Brunswick.....	Maximum	76	66	61	78	69	74	75	79	80	75	81	85	83	90	85	75	82	83	85	81	76	73	68	75	80	77	80	81	83	80	
	Minimum	47	52	46	51	52	57	60	59	54	55	52	64	60	61	65	68	64	62	65	66	56	54	54	49	50	57	58	51	57	63	
Paterson.....	Maximum	81	68	64	73	73	78	80	83	84	81	80	88	82	93	85	78	81	85	85	79	80	78	69	75	82	80	83	84	86	80	
	Minimum	49	51	46	50	52	59	62	61	55	57	59	64	59	61	66	67	64	61	66	64	57	56	55	53	51	57	55	51	60	63	
Plainfield.....	Maximum	78	65	63	70	72	77	72	80	82	77	82	86	78	90	81	77	81	83	87	80	76	65	69	76	80	76	81	80	83	81	
	Minimum	44	50	46	51	51	58	62	60	53	55	53	65	59	63	66	68	64	61	66	66	53	54	53	49	47	56	57	48	56	61	
Somerville.....	Maximum	78	71	64	70	72	77	77	79	80	77	81	86	81	90	87	88	84	85	87	85	79	75	69	74	81	78	80	83	84	78	
	Minimum	41	48	45	50	49	56	61	55	51	54	47	62	55	61	64	77	64	59	64	50	51	50	50	44	54	54	48	52	58	..	
South Orange.....	Maximum	75	66	63	70	70	76	77	78	80	75	81	84	78	89	76	77	83	81	84	80	75	66	75	71	78	77	80	82	80	77	
	Minimum	49	50	46	51	52	57	62	60	57	57	57	64	58	62	62	68	65	62	68	67	57	56	55	53	52	57	57	52	59	62	
New York, N. Y.....	Maximum	75	67	62	69	70	72	75	77	79	75	73	84	73	89	71	74	78	81	76	77	73	65	64	71	76	75	76	80	79	74	
	Minimum	58	48	46	52	56	58	59	58	58	58	61	66	59	62	65	62	62	65	64	62	59	56	54	57	62	56	55	62	65	..	
<i>The Southern Interior.</i>																																
Bridgeton.....	Maximum	74	61																													

Scale of Shades.



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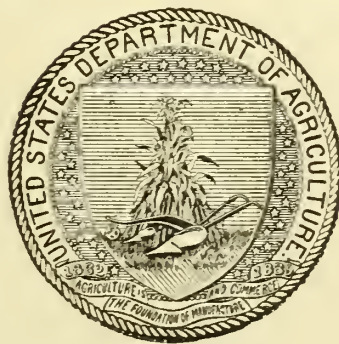
U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU
CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

JULY 1915.

BY
G. HAROLD NOYES
SECTION DIRECTOR



TRENTON, N. J.
WEATHER BUREAU OFFICE
AUGUST 19, 1915.

Departure of the Mean Temperature from the Normal, July, 1915.



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Section Director.

OL. XXVIII. TRENTON, N. J., JULY, 1915. No. 7.

GENERAL SUMMARY.

The weather of July, 1915 was typical of mid-summer conditions in this State. The rainfall varied between wide extremes within a comparatively small area and was usually attendant upon thundershowers, which were somewhat more frequent than normal. The heat was less extreme than frequently occurs in July, and was a little below average, although about five degrees warmer than June. There was somewhat more cloudiness than normal, although not quite so much as last July, so that taking the conditions as a whole, the degree of personal comfort of last July and of this was much the same. As is usual, the counties bordering along the lower Delaware were the warmest, and northern Passaic and Sussex counties were the coolest. There were three periods of the month when it was warmer than normal, viz: from the 1st to 4th, 15th to 19th, and 29th to 31st. The 17th and 31st were the warmest days. From the 5th to 14th, and from the 20th to 28th, temperatures were from normal to 6° and 7° below normal. The coldest days of the month were the 9th, 10th and 25th. The prevailing weather conditions were such as to aid crop growth, but at the same time interfere with harvesting of grass and grain. All crops, however, at the close of the month, were better than average in quantity or quality or both, except apples and pears, which were deficient. The frequency of showers was relatively regular throughout the month.

The mean stage of the Delaware River at Trenton was 1.8 feet, which was 0.8 foot above the ten-year normal, and was the highest July average on record except in 1909, when it was 1.9 feet.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from the observations of 38 stations, was 72.8°, which was 1.0° below normal. The warmest station was Bridgeton, and the coldest, Charlotteburg. The highest temperature in the State was 98° at Tuckerton on the 17th, and the lowest, 44° at Charlotteburg on the 7th. The greatest daily range of temperature was 40° at Indian Mills. There have been many years when both means and extremes have exceeded those of the month of July of this year, so that from temperature conditions the month was more than ordinarily pleasant.

PRECIPITATION.

The average precipitation of the State, as deduced from the observations of 43 stations, was 5.31 inches, which was 0.49 inch above normal. The greatest monthly amount was 11.06 inches at Hightstown, and the least 2.23 inches at Tuckerton. Much of the heavy precipitation recorded on the 1st actually occurred between the hour of taking the evening observation and midnight of June 30th. On the 4th there were a few scattered showers, except that it was mostly fair in the Red Sandstone Plain. The days practically without rain were the 6th, 7th, 9th, 10th, and the 11th until sunset. On the 18th there were a few showers,

and from the 23rd to the 26th, inclusive, it was generally fair. The greatest amount of rain in 24 consecutive hours was 3.50 inches at Chatham on the 13th. The average number of days with 0.01 inch or more of precipitation was 14, which was 4 above normal.

WIND.

The prevailing wind direction was from the southwest with an approximate velocity of 9 miles per hour. The highest velocity, for five minutes, was 64 miles per hour from the northwest, at Long Branch on the 17th.

SUNSHINE AND CLOUDINESS.

The average number of clear days for the month was 10; partly cloudy, 13; cloudy, 8; which was two less, clear, and one more each, partly cloudy and cloudy days, than normal. Sunshine averaged approximately 65% of the possible, and was about normal.

MISCELLANEOUS.

Atmospheric pressure, reduced to sea level, averaged 29.94 inches, which was 0.04 inch below normal. Thunderstorms occurred on an average of 9 days, the largest number being 12 at Trenton. Hail was reported at widely scattered stations on the 2d, 5th, 13th, and 14th. Solar halos were observed on the 4th, 10th, and 15th. The principal dates of dense fog were the 13th, and 26th.

ERRATA.

January, 1915, page 3.—Comparative data, precipitation, mean, 1914, 3.79 should read 3.85; least for 1909, 3.18 should read 2.18. February, 1915, page 12.—Prevailing direction of wind, Newton should be blank, Phillipsburg should read n w., Moorestown, temperature, mean, 38.1°, departure, +7.1°, mean minimum, a29.6°, should read, respectively, 37.9°, -6.9°, a29.2°. Woodbine, temperature, mean, 38.9°, departure, +6.3°, minimum on the 3d, 39°, mean minimum 30.4°, should read respectively, 38.6°, +6.0°, 25°, 29.9°. Page 11, Comparative Data, temperature, 1902, mean, 27.5, should read 27.4°.

COMPARATIVE DATA FOR JULY.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	at least or more prec.
1885	75.2	100	44	3.50	7.28	1.29				
1886	73.0	98	48	4.91	7.95	2.98				
1887	77.1	102	54	7.67	15.29	1.95				
1888	71.1	95	45	3.50	7.03	1.25				
1889	73.4	95	48	10.19	18.58	4.66				
1890	72.5	101	39	5.62	7.55	3.60	12	11	8	9
1891	70.1	95	43	5.30	9.41	3.03	10	11	10	12
1892	74.3	105	44	4.03	7.96	2.38	12	14	5	8
1893	73.9	102	40	2.72	4.63	1.26	14	13	4	8
1894	75.7	106	44	1.66	5.09	0.75	14	12	5	6
1895	70.9	99	41	4.26	7.73	1.53	12	12	7	10
1896	75.0	98	47	5.50	13.29	2.45	13	10	8	13
1897	74.1	102	50	11.42	20.80	6.11	10	11	10	15
1898	75.3	107	38	4.96	11.72	2.23	11	13	7	10
1899	74.7	98	38	5.75	9.62	3.54	13	11	7	11
1900	75.9	104	42	4.74	7.21	1.11	15	12	4	11
1901	77.3	107	45	5.87	10.92	1.89	9	13	9	14
1902	73.0	100	43	4.78	9.92	1.83	10	12	9	13
1903	73.3	100	38	5.51	10.14	2.41	17	10	4	13
1904	72.3	98	42	4.87	8.19	1.67	12	12	7	14
1905	74.4	102	42	4.06	8.06	1.67	9	14	7	13
1906	72.8	94	46	5.58	13.25	3.44	11	14	6	12
1907	73.6	96	40	2.62	6.42	0.95	8	12	11	8
1908	75.6	106	42	4.70	8.12	1.97	12	13	6	9
1909	71.6	99	37	2.12	4.63	1.03	14	14	3	5
1910	75.3	99	42	1.39	5.33	0.22	12	12	7	5
1911	76.0	104	42	3.64	6.46	1.01	14	10	5	9
1912	73.7	100	36	3.86	9.91	1.50	20	9	2	8
1913	74.4	100	41	2.52	4.72	1.94	9	11	11	15
1914	71.5	97	40	6.05	8.57	1.94	10	13	8	14
1915	72.8	98	44	5.31	11.06	2.23				

Climatological data for July, 1915.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.				Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation .01 in. or more.	Clear.	Pt. cloudy.		Cloudy.	Prevailing direction of wind.
The Highlands and Kittatinny Valley.																				
Belvidere.....	Warren.....	289	24	72.8	+0.1	92	31	54	16	31	4.74	-0.86	1.17	0	12	.....	.....	.....	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	23	69.2	-0.3	91	31	44	7	39	4.67	-0.21	1.45	0	8	.....	.....	.....	.....	George S. Briggs.
Culvers Lake†.....	Sussex.....	848	14	.....	.....	.....	.....	49	.....	.....	5.90	+1.14	2.03	0	15	18	9	4	w.	Brice E. Riker.
Dover.....	Morris.....	600	31	70.6	-0.8	90	31	49	10	33	4.59	-0.89	0.67	0	16	.....	.....	.....	.....	William C. Harris.
Layton.....	Sussex.....	480	15	70.6	+0.4	91	31	47	10	33	7.54	+3.11	1.71	0	14	11	10	10	sw.	A. M. Depue.
Newton.....	Sussex.....	678	35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	D. Wilson Smith.
Phillipsburg.....	Warren.....	363	33	73.8	-0.2	94	31	53	10	31	3.95	-0.90	0.58	0	19	16	9	6	sw.	George Dymock.
Sussex.....	Sussex.....	442	25	70.9	-0.8	92	31	50	10	34	5.84	+1.32	2.30	0	11	13	11	7	sw.	.....
Means and extremes.....				71.3	-0.3	94	31	44	7	39	5.32	+0.39	2.30	0	14	14	10	7	sw.	.....
The Red Sandstone Plain.																				
Bayonne.....	Hudson.....	50	25	73.4	-1.0	93	31	57	25	26	5.64	+0.51	2.00	0	13	12	8	11	s.	Erskine R. Eadie.
Bergen Point†.....	Hudson.....	37	18	72.4	-1.0	92	17	55	19	31	7.32	+1.81	2.46	0	13	.....	.....	.....	.....	William H. Mitchell.
Boonton.....	Morris.....	400	25	71.3	.....	94	31	49	25	37	3.49	-1.97	0.67	0	17	.....	.....	.....	.....	J. W. Demmers.
Chatham.....	Morris.....	234	13	.....	.....	.....	.....	.....	.....	.....	9.49	+4.21	3.50	0	16	.....	.....	.....	.....	Miss M. A. Butler.
Elizabeth.....	Union.....	45	36	73.7	-1.8	96	31	52	25	34	7.31	+2.05	1.51	0	16	9	13	9	.....	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	27	73.5	-0.4	94	31	52	25	36	5.98	+1.02	0.80	0	17	13	14	4	sw.	Hiram E. Deats.
Highwood.....	Bergen.....	90	26	71.4	-1.1	91	17	50	25	31	5.30	-0.07	2.23	0	8	5	17	9	s.	Charles J. Bates.
Jersey City.....	Hudson.....	10	16	74.5	-0.2	95	31	58	9	27	4.59	-0.19	1.09	0	16	7	16	8	nw.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	28	73.8	-0.7	93	31	56	25	27	7.23	+2.19	1.08	0	13	.....	.....	.....	.....	Samuel W. Cochran.
Little Falls.....	Passaic.....	180	12	72.0	.....	94	31	50	10	34	2.70	-2.89	0.66	0	11	.....	.....	.....	.....	Montclair Water Co.
Newark.....	Essex.....	159	73	73.5	-0.8	95	31	57	25	27	4.51	-0.22	1.60	0	15	8	10	13	s.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	110	62	72.7	-1.6	92	31	53	25	29	5.96	+0.91	1.13	0	15	10	16	5	sw.	N. J. Experiment Station.
Paterson.....	Passaic.....	80	44	73.9	-0.4	94	31	56	16	30	4.03	-1.30	1.60	0	12	3	21	7	sw.	Heber A. Probert.
Plainfield.....	Union.....	100	29	72.2	-1.7	92	31	53	10	28	6.95	+1.55	1.80	0	17	8	14	9	sw.	John Neagle.
Pompton Plains.....	Morris.....	195	13	.....	.....	.....	.....	.....	.....	.....	4.90	-0.65	1.37	0	12	.....	.....	.....	.....	M. S. Taylor.
Somerville.....	Somerset.....	60	33	72.0	-1.9	94	31	50	17	34	6.05	+0.92	1.00	0	15	12	9	10	sw.	A. A. Macdonald.
South Orange.....	Essex.....	200	45	72.2	-0.9	90	31	55	25	25	6.22	+1.10	1.75	0	12	7	14	10	w.	Dr. W. J. Chandler.
New York, N. Y.....	Essex.....	365	45	72.5	-1.0	92	31	59	9	23	4.60	+0.06	1.35	0	15	6	10	15	sw.	U. S. Weather Bureau.
Means and extremes.....				72.8	-1.0	96	31	49	25	37	5.75	+0.53	3.50	0	14	8	14	9	sw.	.....
The Southern Interior.																				
Bridgeton.....	Cumberland.....	30	34	75.4	-1.7	95	17	53	9	34	3.29	-1.14	1.04	0	11	15	11	5	w.	Henry A. Jorden.
Burlington.....	Burlington.....	12	29	74.4	.....	92	19	55	25	30	8.52	+3.49	2.15	0	13	.....	.....	.....	.....	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	23	74.8	-1.2	94	17	51	25	36	4.23	-0.04	1.09	0	17	.....	.....	.....	.....	George L. Wilson.
Haddonfield.....	Camden.....	75	28	74.0	-1.5	92	17	52	25	34	4.62	+0.32	1.00	0	13	7	17	7	nw.	Prof. Chas. F. Richardson.
Hammonton.....	Atlantic.....	103	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hightstown.....	Mercer.....	140	23	73.1	-0.9	93	31	50	25	35	11.06	+5.09	1.90	0	16	.....	.....	.....	.....	Chas. W. Dunbar.
Imlaystown.....	Monmouth.....	185	27	72.0	-3.2	90	17	52	27	30	7.85	+2.83	1.50	0	15	7	13	11	sw.	H. E. Bullock.
Indian Mills.....	Burlington.....	76	26	73.2	-1.9	94	17	47	35	40	3.58	-0.48	0.45	0	13	11	16	4	se.	James M. Armstrong.
Lakewood.....	Ocean.....	54	12	71.9	-1.2	92	31	46	25	33	6.31	+1.84	1.95	0	12	7	14	10	.....	R. W. Holman.
Moorestown.....	Burlington.....	75	53	73.4	-1.4	90	17	54	25	29	5.88	+1.30	1.04	0	13	.....	.....	.....	.....	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	8	.....	.....	.....	.....	.....	.....	.....	3.39	.....	1.01	0	14	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	17	.....	.....	.....	.....	.....	.....	.....	3.44	-0.70	0.92	0	13	.....	.....	.....	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	44	73.7	-0.8	92	30	57	25	27	7.20	+2.43	1.70	0	16	7	14	10	w.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	22	73.6	-0.5	98	17	51	10	32	2.23	-1.67	0.67	0	10	.....	.....	.....	.....	Frank R. Austin.
Vineland†.....	Cumberland.....	87	47	74.2	-2.2	93	17	54	9	32	4.26	-0.25	1.05	0	14	.....	.....	.....	.....	E. V. C. Hendricks.
Woodbine.....	Cape May.....	43	24	73.6	-0.3	92	17	53	26	30	4.98	+0.96	1.00	0	15	.....	.....	.....	.....	Baron de Hirsch Agr. Sch.
Philadelphia, Pa.....	.....	117	45	76.0	+0.2	93	17	61	25	22	5.02	+0.69	1.20	0	16	7	16	8	nw.	U. S. Weather Bureau.
Means and extremes.....				73.6	-1.4	98	17	46	25	40	5.39	+1.00	2.15	0	14	9	14	8	w.	.....
The Sea Coast.																				
Asbury Park.....	Monmouth.....	22	26	71.4	-1.5	92	31	57	9	26	2.46	-2.79	0.54	0	14	8	15	8	.....	Wilbur H. Pancoast.
Atlantic City.....	Atlantic.....	16	42	72.6	+0.1	93	31	58	9	26	2.37	-1.41	0.44	0	15	8	10	13	sw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	31	72.8	-0.6	92	31	60	23	21	4.11	+0.33	1.06	0	16	9	18	4	s.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	17	72.9	-1.0	91	31	61	26	21	3.46	-1.32	0.66	0	16	7	17	7	s.	U. S. Weather Bureau.
Means and extremes.....				72.4	-0.8	93	31	57	9	26	3.10	-1.30	1.06	0	15	8	15	8	s.	.....
For the State.....				72.8	-1.0	98	17	44	7	40	5.31	+0.49	3.50	0	14	10	13	8	sw.	.....

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

* Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville, Bergen Point is Bayonne, Vineland, is South Vineland.

Daily precipitation for July, 1915.

Stations.	Day of month.																															Total.		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
<i>The Highlands and Kittatinny Valley.</i>																																		
viders.....		.11	.14		.19			.81				.20	.31	.12						.71	.06	1.17						.62		.30			4.74	
arlotteburg.....		.11		.18	.31			1.20			*	1.45	T.						.48		.59						.59		.10	.04		.35	4.67	
ivers Lake.....		.72	2.01	.02	.45	.21		1.00				.23	.08			T.			.07	.14	.02						.79		.04		.02	5.90		
ver.....		.67		.52	.35			.35				.25	.22			.39	.18		.25		.11	.12				*	.50	.61	.02		.05	4.59		
yton.....		.37	1.71	.22	.42	.30		.99				.17		.13		T.	T.		.60	.75	T.	.20					.35	.68	.60	.03		.02	7.54	
yton.....																																		
illsburg.....		.23	.16	.02	T.	.09		.34				.14	.05	.53		.26	.51		.48	.09	T.	.20	.07					.56	.11	.09	.01	.01	3.95	
sex.....		.57	2.30	.40		.11		.87				.14	.04						.49		.08						.71		.13				5.84	
<i>The Red Sandstone Plain.</i>																																		
yonne.....	2.00	.02	T.		1.21			.32			T.	.20	.10	.05		.15	.16			.02	T.	.32						.33	T.	.76			5.64	
rgen Point.....	2.46	.05		T.	1.18			.38			T.	.22	.18	.10		.22	.31		T.	T.	T.	1.18						.54		.50	.02		7.32	
nton.....	.43		.05	.22	.22	.21		.06	.61			.13		.04		T.	.12	.01		.08	T.	.02	.10	T.				.73		.18	.60	.04	3.49	
atham H.....	1.60		.12		.33	.62		.10	.35			.20	.06	3.50		.08	.27	.38		.03		.30						.73		.18			9.49	
izabeth.....	1.23	.09	T.		1.35			.41				.29	*	.98		.12	.02		T.	.04	.01	1.51						.38	.33	.55			7.31	
ilmington.....	.18	.42			.51		T.	.41			T.	.36		.80		.51	.39	.41		.01	.03	.02		.08				.58	.24	.67	.36		5.98	
ghwood.....	2.23	.01	.04		1.60			.45				.13		.04		.06	.56		T.		.06	.93						.35	T.	.49		T.	5.30	
sey City**.....	.02	.03	T.		1.09			.27			.12	.08	.06			T.					.06	.93						.27	.26	.52	.24		.02	4.59
ubertville.....	.33	.89			.57			.88				.52		.77		.16	.23	.22	T.	.06		1.08						.73		.79			7.23	
le Falls**.....	.05	.14	T.		.50			.51			.06	.11	.04			T.	.03		.05	T.								.66	T.	.55			2.70	
ark**.....	.18	.02	.01		1.60		T.	.45			.07	.09	.14			.09	.26		T.	T.	T.	.47					.70	.06	.35	.02	T.		4.51	
w Brunswick.....	.67	.24	.01		1.06			.64	.09			.30		.38		.62		.05	T.	T.	T.	.02	.29		T.			.45	T.	1.13	.01		5.96	
erson.....	1.60	.12	.03		.44			.38			T.	.22	.05			T.	.06		T.	.03	T.	.10						.57	.02	.41		T.	4.03	
infield**.....	.02	.20	.05		1.80			1.10			.15	.24	1.27			.28	.16		.05	T.	.16	.07						.23	.18	.97	.02	T.	6.95	
mpton Plains H.....	1.37		.09		.12	.31		.13	.63			.22		.63		.06				.14		.46						.49		.19		.06	4.90	
ernville.....	.77	.14	T.	.02	1.00			.48	.01			.31		.91		.23	.15			.11		.48	.01					.47		.96			6.05	
ith Orange.....	1.43	*	.06		1.75			.73			T.	.12	.52			.14	.21		T.	T.	T.	.50						T.	.68	T.	.08		T.	6.22
w York, N. Y. ***.....	.07	.04	T.		1.05		T.	.17			.17	.04	.07			.14	.55		T.	T.	.24	1.11						.42	.07	.39	.07		4.60	
<i>The Southern Interior.</i>																																		
dgeton.....		T.			.35						.21	T.		.50		.03	.50			.10	.13	*	1.04					.05			.20	.18	3.29	
rlington.....	.05	.42			.48			2.15				.59		.64	T.	1.98	.52	.13		.65								.25	T.	.22		.32	8.52	
yton.....	.07	.03	.24	.04	.06			.09	.21			.77		.82		.03	.31			.11		.04	1.09					.14		.16	.02		4.23	
ddonfield.....	.19	.53	T.	.08	T.			.67			T.	.64		.35	T.	.27	.15	T.		.25	T.	.20		T.				.28		1.00	.01		4.62	
mmonton.....																																		
ghtstown.....	.57	1.90	.06		.65			1.42	.03			.70		.72		.54	.68	.88		.05		.05	.03					1.34	T.	1.44	T.		11.06	
laystown.....	1.10	1.50	T.		.15			.50				.60		.75	T.	.30	.80	.45		.05	T.	.20	.60					.45	T.	.35		.05	7.85	
lian Mills.....	.44	.30		.06	.42			.37				.44		.29	T.	.12	.43			.07	T.	.45	.24					.27		.11			3.58	
ewood.....	1.95	.84	T.	.07	.16			.50				.88	.17			.72	.43		T.		.05	T.						.09	T.	.45			6.31	
orestown.....	.03	.37			.40			1.04				.73		.53		.97	.33			.35		.10						.33		.64		.06	5.88	
orthfield.....	.17	.21	T.	.17	.38				.09			.87		.07		.27	1.01			.01	.07	.01						.04		.02			3.39	
asantville.....	T.	.12		.20	.30			.21			T.	.75		.33		.31	.92		T.	.01	.03	.02						.04		.20	T.		3.44	
enton***.....	.01	1.70	T.	T.	.75			.94			.34	.01	.82		T.	.49	.50		.01	.02	.01	T.					.93	.02	.63	.02	T.		7.20	
ickerton.....	.11				.45			.67				.32		.17		.10	.27			.03	.05							.06					2.23	
eland.....	.69		T.		.30			.09			T.	.11	.42	1.05	T.	.03	.11		.04	.02	.56	.62						.10		.12	T.		4.26	
oodbine.....		.32		.46	.40			*				.22	.93	1.00		.80	.08			.06	.08	.33						T.		.15	.05	.10	4.98	
iladelphia, Pa. ***.....	.01	.29	T.	T.	.59			.25			.61		.70		.01	.42	T.		.35	.05	.10	.13						.27	.04	1.19	.01	T.	5.02	
<i>The Sea Coast.</i>																																		
bury Park**.....	.39	.43		.02	.13			.11			.54	.04	.03		.46		T.	.02	.02									.01	.02	.24			2.46	
atlantic City***.....	T.	.41	.43	.01	.31			.01			.18	.12	.02	.02	T.	.21	.43			.19								.01	T.	.01	.01		2.37	
ape May City***.....		.04	.01	.13	.72			.02			.01	.47	.25	.81	.02	.44	.18			.20								T.	.50	.27	.04		4.11	
ong Branch**.....																																		
ndy Hook***.....	.36	.15			.66			.20			.36	.16	.54			.13	.01			.02	.02	.02						.40		.32	.10	.01	3.46	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24 hour period, midnight to midnight.

[] Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.

* Precipitation included in the next following measurement. **Precipitation for 24 hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.				Moisture.		Sun. shine.
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m	Percentage of possible sunshine.
							Miles per hour.	Direction.	Date.			
Atlantic City.....	29.95	30.23	25	29.61	8	7	23	sw.	8	80	83	73
Essexbury Park.....	29.94	30.26	24	29.56	8	8	32	nw.	17			56
Cape May.....		30.24	25	29.68	8	6						68
New Jersey City.....	29.95	30.26	24	29.55	8	12	64	nw.	17	83	72	68
Long Branch.....							24	§		*72	*69	
Newark.....	29.93	30.22	24	29.54	8	12	77	nw.	18	77	73	63
Philadelphia, Pa.....	29.94	30.24	24	29.57	8	8	38	n.	13	79	74	62
Camden Hook.....	29.93	30.23	24	29.51	8	11	54	n.	8	90	86	62
Frederickton.....	29.92	30.22	24	29.53	8	9	46	sw.	19	80	70	68

Daily temperature for July, 1915.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean		
<i>The Highlands and Kittatinny Valley.</i>																																		
Belvidere.....	Maximum ...	82	79	85	83	79	79	75	81	82	82	83	80	87	89	89	89	91	90	91	84	75	79	82	83	86	84	85	81	87	90	92	84.0	
	Minimum ...	65	63	64	62	65	54	54	61	54	54	56	62	60	62	62	69	70	62	65	67	60	59	57	55	54	58	64	62	67	75	70	61.7	
Charlotteburg.....	Maximum ...	81	73	84	82	78	77	77	73	77	81	80	72	84	87	86	82	90	88	87	77	76	75	79	80	84	83	80	81	86	90	91	81.3	
	Minimum ...	64	57	62	58	65	55	44	60	56	46	48	60	53	59	55	64	66	62	62	64	60	56	49	48	45	48	60	53	64	62	68	57.2	
Dover.....	Maximum ...	82	74	86	83	76	78	79	72	81	82	81	71	87	87	87	79	89	89	89	79	71	75	78	81	82	84	79	82	86	87	90	81.5	
	Minimum ...	66	61	64	61	61	56	51	60	56	49	54	62	57	59	61	67	69	62	63	64	60	58	54	52	50	53	62	59	67	66	69	59.8	
Layton.....	Maximum ...	81	78	83	83	77	76	78	71	79	80	79	74	86	88	87	82	90	88	89	78	72	79	82	85	85	85	82	81	87	90	91	82.1	
	Minimum ...	66	62	63	61	62	53	50	60	53	47	52	62	58	56	57	64	68	58	62	62	55	58	56	55	56	55	61	57	66	66	67	59.0	
Newton.....	Maximum ...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		
	Minimum ...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		
Phillipsburg.....	Maximum ...	83	80	87	85	81	79	83	80	83	83	83	83	86	90	91	89	91	90	93	80	77	82	83	85	88	89	85	83	90	92	94	85.4	
	Minimum ...	69	62	62	62	56	57	65	58	53	56	64	61	61	61	63	69	71	63	66	66	60	60	57	55	57	59	63	63	67	71	70	62.2	
Sussex.....	Maximum ...	80	77	83	83	76	74	79	74	78	80	80	71	87	87	87	82	90	88	89	79	71	79	82	85	86	84	80	83	86	90	92	82.0	
	Minimum ...	67	62	62	61	61	54	51	59	57	50	55	60	56	57	61	67	70	61	64	63	59	56	59	52	52	56	62	58	67	67	69	59.8	
<i>The Red Sandstone Plain.</i>																																		
Bayonne.....	Maximum ...	86	76	84	84	77	81	80	76	83	83	79	76	84	88	88	82	92	90	92	81	75	73	75	78	81	79	84	90	90	93	82.7		
	Minimum ...	65	64	64	65	64	60	58	64	59	58	61	62	62	62	66	70	71	67	69	69	65	62	58	59	57	60	63	69	67	70	74	64.0	
Bergen Point.....	Maximum ...	84	74	85	85	78	78	79	78	82	82	82	74	84	87	89	80	92	86	91	79	76	75	77	77	80	81	82	85	86	90	92	82.3	
	Minimum ...	65	64	64	63	64	61	56	64	55	55	57	61	60	61	64	69	69	65	67	61	64	62	58	59	56	59	59	65	66	68	72	62.4	
Boonton.....	Maximum ...	84	80	84	84	78	78	79	76	81	79	78	73	84	87	89	85	90	88	87	81	76	79	80	77	86	84	85	83	88	90	94	82.8	
	Minimum ...	61	60	64	62	62	59	50	62	59	52	53	62	52	57	59	68	67	65	63	67	63	59	52	50	49	52	61	60	67	65	72	59.8	
Elizabeth.....	Maximum ...	88	80	89	86	79	83	83	80	85	84	82	86	88	92	90	85	94	92	93	84	75	76	80	82	86	87	86	87	91	92	96	85.8	
	Minimum ...	66	63	64	63	67	54	54	65	53	53	60	56	59	59	63	69	70	65	66	68	64	62	55	56	52	56	62	65	68	69	72	61.6	
Flemington.....	Maximum ...	85	80	85	84	79	80	79	77	81	81	80	79	84	88	87	87	93	90	89	80	79	77	75	80	81	88	87	89	89	90	91	94	84.1
	Minimum ...	69	64	63	64	68	58	53	64	59	53	56	65	60	62	66	70	70	65	65	68	63	62	56	57	52	57	64	64	68	74	72	62.9	
Highwood.....	Maximum ...	85	73	81	82	75	78	77	71	82	82	81	70	84	86	84	79	91	87	90	76	70	72	77	78	81	84	80	85	88	89	90	80.5	
	Minimum ...	65	61	63	62	63	55	52	62	51	52	56	61	58	60	62	68	69	64	67	67	64	60	53	54	50	55	60	59	67	72	75	62.2	
Jersey City.....	Maximum ...	86	77	82	86	78	80	81	75	85	86	85	77	86	91	91	83	91	88	89	80	77	72	79	77	72	76	80	83	85	86	90	93	83.9
	Minimum ...	67	65	62	68	65	61	60	65	58	61	64	63	64	64	68	72	68	68	71	68	63	62	60	62	60	62	63	68	69	72	75	65.1	
Lambertville.....	Maximum ...	84	81	84	82	80	77	79	75	82	83	80	83	85	85	85	87	91	89	88	80	77	72	76	80	83	85	82	81	86	90	93	82.7	
	Minimum ...	69	65	65	66	69	59	57	66	59	57	60	66	65	64	67	71	72	66	70	69	64	63	60	59	56	63	65	67	69	73	74	65.0	
Little Falls.....	Maximum ...	84	77	88	88	80	80	78	80	84	86	76	89	89	89	82	85	92	90	84	75	72	80	82	81	84	86	86	87	88	92	94	84.2	
	Minimum ...	64	62	63	61	60	55	52	58	54	50	55	59	57	57	62	68	69	69	66	64	65	61	58	54	53	51	54	60	61	66	70	59.8	
Newark.....	Maximum ...	86	71	86	84	78	81	80	73	82	82	82	73	84	90	89	79	92	89	91	78	74	72	77	79	81	82	82	83	88	91	95	82.4	
	Minimum ...	66	64	64	67	64	60	59	62	59	63	63	61	62	63	69	70	71	69	70	69	66	63	58	59	57	60	63	67	67	72	75	64.6	
New Brunswick.....	Maximum ...	83	79	83	88	..	77	80	79	81	81	83	75	84	87	89	83	90	88	89	78	73	75	76	76	82	84	83	82	87	89	92	82.6	
	Minimum ...	67	64	64	..	64	56	54	64	59	55	59	62	60	60	65	69	70	66	66	68	64	62	58	57	53	58	64	65	66	71	73	62.8	
Paterson.....	Maximum ...	85	80	86	85	77	81	82	76	84	85	85	73	89	90	90	82	92	92	93	82	74	75	77	78	81	86	87	82	84	89	93	84.3	
	Minimum ...	67	65	64	65	68	56	56	66	56	57	60	62	60	62	67	72	71	65	69	69	65	63	57	57	56	58	61	64	66	70	72	63.5	
Plainfield.....	Maximum ...	84	72	84	83	76	78	80	78	82	81	82	76	84	86	88	82	90	87	90	79	74	73	77	78	81	83	83	84	86	88	92	82.3	
	Minimum ...	68	64	64	65	67	54	56	64	54	53	57	63	60	59	63	70	69	63	65	67	64	61	57	56	53	58	62	65	68	70	74	62.8	
Somerville.....	Maximum ...	84	80	85	83	83	79	80	78	80	81	82	78	84	88	90	84	91	91	89	83	77	77	79	79	84	83	85	84	89	92	94	83.7	
	Minimum ...	66	62	63	63	67	51	50	62	56	50	53	63	59	58	62	69	67	61	62	67	63	59	55	53	50	54	61	62	65	68	71	60.3	
South Orange.....	Maximum ...	82	71	84	83	76	77	80	76	80	80	80	73	84	85	86	80	89	86	89	78	73	76	75	77	70	81	81	82	86	87	90	80.9	
	Minimum ...	67	65	64	64	63	58	56	65																									



Scale of Shades.

- 0 to 2 inches.
- 2 to 4 inches.
- 4 to 6 inches.
- 6 to 8 inches.
- Over 8 inches.

U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU
CHARLES F. MARVIN, CHIEF

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CLIMATOLOGICAL DATA

NEW JERSEY SECTION

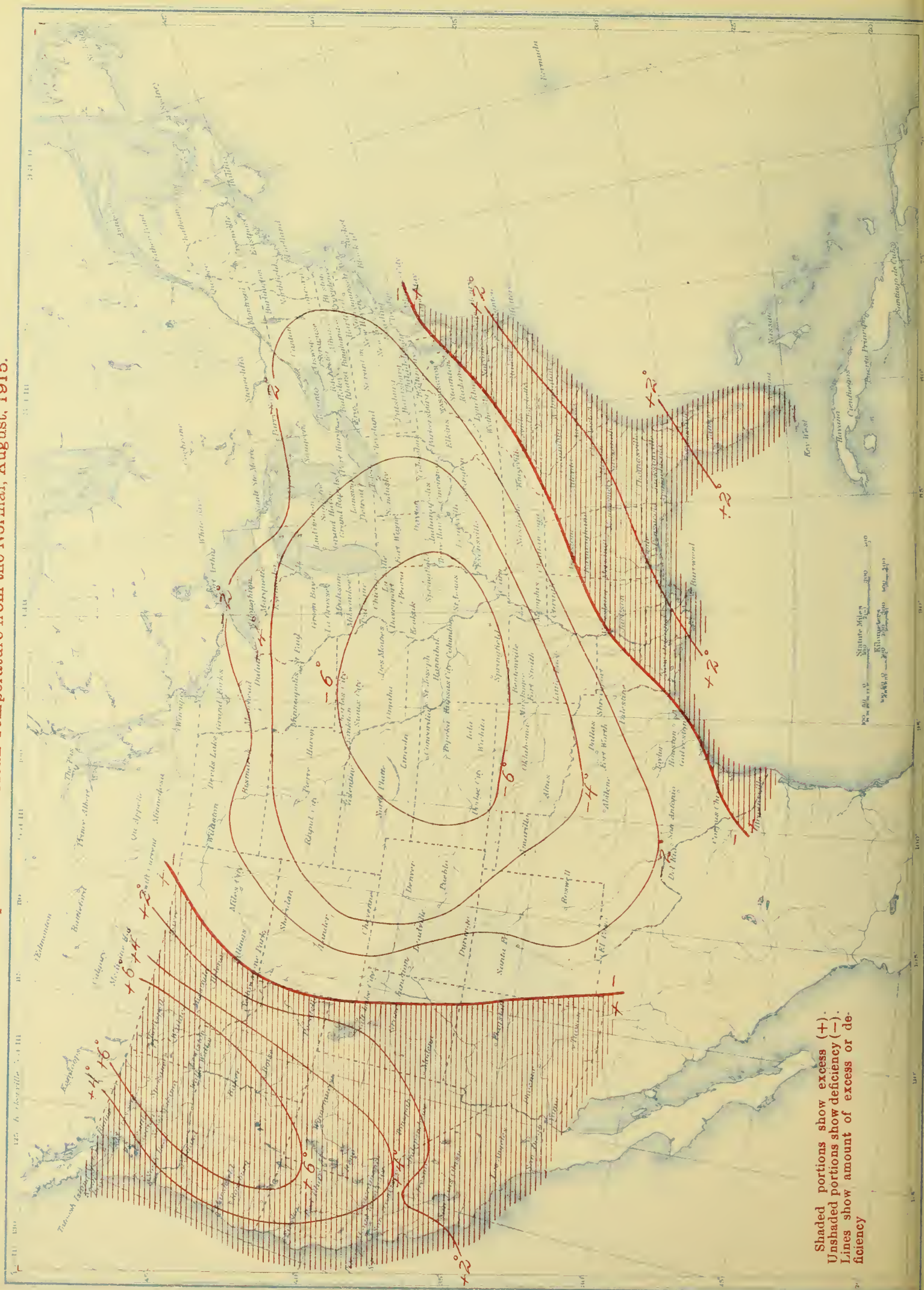
AUGUST 1915.

BY
G. HAROLD NOYES
SECTION DIRECTOR



TRENTON, N. J.
WEATHER BUREAU OFFICE
SEPTEMBER 22, 1915.

Departure of the Mean Temperature from the Normal, August, 1915.



Shaded portions show excess (+).
Unshaded portions show deficiency (-).
Lines show amount of excess or deficiency.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Section Director.

VOL. XXVIII. TRENTON, N. J., AUGUST, 1915. No. 8.

GENERAL SUMMARY.

August opened with a moderate amount of rain, and was followed on the 4th by an almost unprecedented downpour which occurred at nearly every station in the State. From the 1st to the 9th, except on the 5th and 7th, the rain was general, and totaled considerably more than the monthly normal. The heaviest amounts fell in portions of Passaic, Essex and Union counties, and on the 4th, 24 hourly amounts of from 4 to almost 5 inches were reported at 8 stations. As was to be expected, ordinary water courses were inadequate to contain the flood, and there was much resulting damage in the vicinity of Plainfield, Bound Brook, New Brunswick and Elizabeth. Electric car service was crippled between Newark and Bound Brook because of flooding of the tracks. Cook's dam at Scotch Plains gave way and a flood of water overspread Plainfield and vicinity, inundating power plants so that some factories were forced to shut down. Lightning caused moderate damage in several sections. This rain, and more that occurred later, put much farm land under water, and corn and potatoes in many instances were submerged several inches, causing considerable potato rot. Excess of rain, also is blamed for a lack of taste in several varieties of farm products, notably peaches and tomatoes, which although more than usually fine in appearance and quality, were deficient in piquancy of flavor. The month was the third rainiest August since State averages have been compiled, having been exceeded since 1885, in 1901, and 1911. Temperatures during the month were not remarkable, being slightly under normal throughout the State, except along the southeast coast, and extreme maxima did not reach 100°, so that except for the wet periods, the weather was generally agreeable.

The average monthly stage of the Delaware River at Phillipsburg was 3.6 feet, and at Trenton was 2.5 feet, the latter being 1.7 feet above normal.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 39 stations, was 70.9°, which was 1.1° below normal. The only portion of the State not below normal was the southeastern shore. The section from Mercer to Union counties was more subnormal than any other. The northern tier of counties was the coolest region, and the warmest was in the southwest and south. The highest temperature of the month was 98° at Bridgeton and Clayton on the 1st, and the lowest, 41° at Charlotteburg on the 27th. The greatest daily range of temperature was 35°. The highest monthly mean temperature was 73.8° at Bridgeton, and the lowest, 67.2° at Charlotte-

burg. The periods of the month warmer than normal were: 1st, 2d, 13th to 16th, and 22d to 24th.

PRECIPITATION.

The average rainfall for the State, as deduced from observations of 44 stations was 7.73 inches, which was 2.89 inches above normal. The greatest amount was 10.92 inches at Bridgeton, and the least, 4.02 inches at Asbury Park. The principal rainy days were from the 1st to 9th, except the 5th and 7th, 12th, 13th, 15th, 21st, 22d, 25th, 28th, 29th, and 30th. Averaging all stations, amounts of rain exceeding an inch in 24 consecutive hours fell on more than two days of the month. The greatest amount in 24 consecutive hours was 4.89 inches at South Orange on the 4th. The average number of days on which 0.01 inch or more rain fell was 14, which was 4 more than normal.

WIND.

The prevailing wind direction was southwest, with an average velocity of about 11 miles per hour. The highest wind velocity was 78 miles per hour from the east on the 4th at Long Branch.

SUNSHINE AND CLOUDINESS.

The average number of clear days throughout the State was 11; partly cloudy, 11; cloudy, 9; which was two less clear, and two more cloudy than normal. Sunshine averaged 58 per cent, and was about normal.

MISCELLANEOUS.

Atmospheric pressure, reduced to sea level, was 29.97 inches, which was 0.03 inch below normal. Highest pressure occurred on the 27th, and lowest on the 22d. Thunderstorms occurred on 8 days of the month, and were uniformly general on the first three days. There were scattered occurrences of hail, one each on the 1st, 3d, and 9th. Dense fog occurred on the 1st, 2d, 15th, and 24th. Solar halos were observed on the 11th, 16th, 27th, and 31st.

COMPARATIVE DATA FOR AUGUST.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Cloudy.	Partly cloudy.	.01 inch or more prec.
1885.....	71.7	95	40	6.11	10.09	3.47	.....	.....	.....	.....
1886.....	69.5	96	42	2.81	5.36	1.10	.....	.....	.....	.....
1887.....	70.4	94	42	3.76	7.34	2.09	.....	.....	.....	.....
1888.....	72.5	98	41	6.13	10.53	2.55	.....	.....	.....	.....
1889.....	69.6	91	45	5.13	9.06	1.93	.....	.....	.....	.....
1890.....	71.5	99	40	4.90	7.51	2.89	8	15	8	11
1891.....	72.8	100	46	5.32	8.89	2.58	8	11	12	13
1892.....	73.4	99	46	3.63	5.65	0.72	12	13	6	9
1893.....	72.8	98	38	6.52	11.94	3.55	14	11	6	8
1894.....	70.9	97	44	2.58	9.28	0.15	13	12	6	7
1895.....	74.2	102	34	2.53	5.06	0.02	16	12	3	7
1896.....	73.6	105	39	1.83	3.27	0.50	17	19	4	7
1897.....	71.0	97	41	4.39	8.69	2.07	14	12	5	9
1898.....	74.8	98	42	5.36	9.28	2.70	12	12	7	10
1899.....	72.3	99	39	4.36	9.70	2.16	10	12	9	9
1900.....	76.3	104	41	2.68	4.56	0.70	15	11	5	10
1901.....	73.8	98	44	9.43	15.80	4.88	12	10	9	11
1902.....	70.1	93	40	3.91	10.67	1.31	15	13	3	9
1903.....	68.4	98	39	6.95	14.54	4.30	10	10	11	13
1904.....	70.8	92	37	6.62	13.01	2.65	15	10	6	9
1905.....	71.1	95	38	5.72	9.88	3.51	13	10	8	12
1906.....	74.6	97	42	5.95	17.91	2.21	10	11	10	13
1907.....	70.5	96	39	3.45	7.61	1.79	14	12	5	10
1908.....	70.6	103	36	5.05	9.23	2.43	11	10	10	10
1909.....	70.2	100	34	4.59	12.94	1.41	14	9	8	6
1910.....	70.4	92	36	3.78	8.46	1.76	9	10	12	10
1911.....	72.1	101	39	8.91	14.74	5.31	10	11	10	11
1912.....	70.0	95	35	3.42	7.62	1.19	12	13	6	10
1913.....	71.7	100	38	4.06	10.21	1.93	18	9	4	10
1914.....	73.3	98	42	3.15	6.53	1.04	13	12	6	9
1915.....	70.9	98	41	7.73	10.92	4.02	11	11	9	13

Climatological data for August, 1915.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation .01 in. or more.	Clear.	Pt. cloudy.			Cloudy.	
The Highlands and Kittatinny Valley.																					
Belvidere.....	Warren.....	289	24	69.4	-1.4	91	1	47	19	30	6.27	+1.31	1.73	0	13	15	7	9		Samuel J. Hixson. George S. Briggs. Brice E. Riker. William C. Harris. A. M. Depue.	
Charlotteburg.....	Passaic.....	719	23	67.2	-0.5	88	16	41	27	35	9.34	+4.59	.....	0	11	.....	.....	.....	nw.		
Culvers Lake.....	Sussex.....	848	14	.....	.....	.....	.....	43	27	.....	8.24	+3.71	2.22	0	15	14	6	11	e.		
Dover.....	Morris.....	600	31	67.6	-1.6	87	14	46	27	31	8.57	+3.57	3.12	0	14	.....	.....	.....	w.		
Layton.....	Sussex.....	480	15	67.8	-0.6	90	1	42	19	35	6.87	+3.23	1.30	0	17	12	6	13	w.		
Newton.....	Sussex.....	678	35											0						D. Wilson Smith. George Dymock.	
Phillipsburg.....	Warren.....	363	33	71.0	-0.7	94	1	51	18	29	7.55	+2.85	2.66	0	17	16	4	11	nw.		
Sussex.....	Sussex.....	442	25	67.7	-1.9	89	1	45	18	33	5.77	+1.45	1.88	0	13	11	10	10	sw.		
Means and extremes.....					68.4	-1.1	94	1	41	27	35	7.52	+2.96	3.12	0	14	14	6	11	nw.	
The Red Sandstone Plain.																					
Bayonne.....	Hudson.....	50	25	71.6	-1.3	90	16	54	18	24	6.54	+1.43	3.46	0	15				sw.	Erskine R. Eadie. William H. Mitchell. J. W. Demmers. Miss M. A. Butler. L. B. Bonnett.	
Bergen Point.....	Hudson.....	37	18	70.8	-0.9	89	13	50	18	31	7.87	+2.81	3.83	0	15	8	17	6	se.		
Boonton.....	Morris.....	400	25	69.8	.....	91	1	46	27	33	9.55	+4.16	2.38	0	15	17	4	10	ne.		
Chatham.....	Morris.....	234	13	.....	.....	.....	.....	.....	.....	.....	10.31	+5.39	3.16	0	15	17	5	9	w.		
Elizabeth.....	Union.....	45	36	71.8	-1.7	90	11	49	18	31	8.22	+3.68	4.55	0	12	9	14	8	w.		
Flemington.....	Hunterdon.....	140	27	71.2	-0.6	92	1	50	18	30	8.07	+3.66	1.93	0	16	15	9	7	sw.	Hiram E. Deats. Charles J. Bates. S. K. Pearson, Jr. Samuel W. Cochran. Montclair Water Co.	
Highwood.....	Bergen.....	90	26	68.0	-3.2	86	16	47	18	28	8.77	+3.70	3.66	0	13	6	16	9	nw.		
Jersey City.....	Hudson.....	10	16	72.5	-0.8	91	16	54	18	24	7.08	+2.43	3.19	0	14	8	15	8	nw.		
Lambertville.....	Hunterdon.....	80	28	71.6	-0.8	93	1	53	18	24	7.70	+2.94	2.42	0	12	10	15	6	sw.		
Little Falls.....	Passaic.....	180	12	68.8	.....	92	1	47	19	30	8.70	+3.59	4.41	0	14	.....	.....	.....	w.		
Newark.....	Essex.....	159	73	70.9	-1.7	90	16	54	18	21	7.77	+2.53	4.20	0	15	11	5	15	w.	Prof. William Wiener. N. J. Experiment Station. Heber A. Probert. John Neagle. M. S. Taylor	
New Brunswick.....	Middlesex.....	110	62	70.2	-2.2	90	1	50	18	26	10.63	+5.54	3.87	0	12	11	13	7	nw.		
Paterson.....	Passaic.....	80	44	71.1	-0.9	90	11	52	18	27	9.21	+4.08	4.43	0	13	3	20	8	nw.		
Plainfield.....	Union.....	100	29	69.8	-2.3	88	1	48	18	28	9.78	+4.91	4.02	0	16	11	13	7	sw.		
Pompton Plains.....	Morris.....	195	13	.....	.....	.....	.....	.....	.....	.....	8.03	+2.95	1.97	0	14	.....	.....	.....	sw.		
Somerville.....	Somerset.....	60	33	70.3	-1.6	90	1	47	18	31	10.85	+6.14		0	13	9	9	13	nw.	A. A. Macdonald. Dr. W. J. Chandler. U. S. Weather Bureau.	
South Orange.....	Essex.....	200	45	69.8	-0.9	86	11	52	18	24	9.25	+3.86	4.89	0	12	6	12	13	w.		
New York, N. Y.....		365	45	70.4	-1.8	87	16	55	18	21	5.37	+0.84	2.23	0	15	3	16	12	nw.		
Means and extremes.....					70.5	-1.5	93	1	46	27	33	8.73	+3.75	4.89	0	14	10	12	9	w.	
The Southern Interior.																					
Bridgeton.....	Cumberland.....	30	34	73.8	-1.3	98	1	50	18	30	10.92	+6.18	2.55	0	11	16	6	9	w.	Henry A. Jorden. D. S. B. McCoy. George L. Wilson. Prof. Chas. F. Richardson.	
Burlington.....	Burlington.....	12	29	72.3	.....	95	1	52	18	26	7.78	+2.17	2.60	0	15	.....	.....	.....	nw.		
Clayton.....	Gloucester.....	126	23	72.4	-1.1	98	1	48	18	30	8.68	+3.53	.....	0	13	.....	.....	.....	sw.		
Haddonfield.....	Camden.....	75	28	71.3	-1.6	96	1	50	18	29	6.61	+2.02	2.10	0	14	7	16	8	nw.		
Hammononton.....	Atlantic.....	103	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	.....	.....	.....	.....	nw.		
Hightstown.....	Mercer.....	140	23	71.2	-0.7	93	1	49	18	31	6.56	+1.79	2.58	0	13				w.	Chas. W. Dunbar. H. E. Bullock. James M. Armstrong. R. W. Holman. Geo. L. Gillingham.	
Inlaytown.....	Monmouth.....	185	27	70.0	-3.1	92	1	48	18	30	5.35	+0.49	2.00	0	12	11	11	9	sw.		
Indian Mills.....	Burlington.....	76	26	71.8	-1.3	95	1	47	18	33	9.70	+4.53	4.39	0	15	12	11	8	sw.		
Lakewood.....	Ocean.....	54	12	70.4	.....	90	2	48	18	29	7.40	.....	3.20	0	15	9	8	14	w.		
Moorestown.....	Burlington.....	75	53	71.6	-0.9	94	1	50	18	25	5.75	+1.01	2.11	0	11	11	14	6	nw.		
Northfield.....	Atlantic.....	25	8								6.38		2.27	0	11					William L. Flick. Lincoln Van Gilder. U. S. Weather Bureau. Frank R. Austin. E. V. C. Hendricks.	
Pleasantville.....	Atlantic.....	26	17	.....	.....	.....	.....	.....	.....	.....	7.07	+2.38	2.34	0	11	.....	.....	.....	.....		
Trenton.....	Mercer.....	190	44	70.9	-2.1	94	1	53	18	23	6.22	+0.85	2.24	0	16	5	11	15	w.		
Tuckerton.....	Ocean.....	23	22	72.4	+0.2	96	16	47	18	31	7.64	+1.86	2.28	0	13	.....	.....	.....	sw.		
Vineland.....	Cumberland.....	87	47	73.1	-0.5	95	1	50	18	28	7.40	+2.43	1.45	0	13	.....	.....	.....	sw.		
Woodbine.....	Cape May.....	43	24	73.4	+1.2	96	1	50	18	25	6.48	-2.18	2.29	0	12				s.	Baron de Hirsch Agr. Sch. U. S. Weather Bureau.	
Philadelphia, Pa.....		117	45	73.1	-0.7	96	1	58	18	23	6.84	+2.23	2.75	0	15	6	11	14	nw.		
Means and extremes.....					71.9	-1.0	98	1	47	18	33	7.33	+2.42	4.39	0	13	10	11	10		sw.
The Sea Coast.																					
Asbury Park.....	Monmouth.....	22	26	71.8	-0.1	88	1	53	18	22	4.02	-1.12	1.03	0	14	14	13	4	se.	Wilbur H. Pancoast. U. S. Weather Bureau. U. S. Weather Bureau. William D. Martin, Jr. U. S. Weather Bureau.	
Atlantic City.....	Atlantic.....	16	42	72.9	+0.3	89	16	54	18	24	4.98	+0.68	1.57	0	11	8	11	12	sw.		
Cape May City.....	Cape May.....	17	31	73.2	-0.2	87	4	55	18	21	5.22	+0.96	1.17	0	14	11	14	6	s.		
Long Branch.....	Monmouth.....	25	8	72.2	.....	91	16	52	19	26	8.29	.....	4.17	0	13	9	12	10	s.		
Sandy Hook.....	Monmouth.....	22	17	71.4	-1.3	88	16	58	18	19	6.72	+1.87	3.10	0	12	8	15	8	ne.		
Means and extremes.....					72.3	-0.3	91	16	52	19	26	5.85	+0.60	4.17	0	13	10	13	8	s.	
For the State.....					70.9	-1.1	98	1	41	27	35	7.73	+2.89	4.89	0	14	11	11	9	sw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

* Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne Vineland; is South Vineland.

Daily precipitation for August, 1915.

Stations.	Day of month.																															Total.		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
<i>The Highlands and Kittatinny Valley.</i>																																		
elvidere.....	1.11		.30	1.73		.38		.28	.27			.24			.44						.04	.22												
harlottesville.....	.87	*	*	4.48		.42		1.43	.41			.34			T.							.51						*	*	1.26			6.27	
ulvers Lake.....	T.	.48	.41	2.22		.24		1.31	.54			.16	.39		.15							.09	.48	T.		.77		.03	.87	.10			9.34	
over.....	1.43	*		43.3.12		.55		1.25				.61	*		.04							.30			.02			*	.64	.18			8.57	
ayton.....	1.30	.22	.36	1.28		.27	T.	.37	.19			.16	.61		.11							.06	.86			.25			.61	.16	.02		6.87	
ewton.....																																		
hillipsburg.....	.02	1.41	.41	2.66		.55		.33	.28	T.		.11	.37		.25							.02	.07	.01		.05		.03	.78	.20			7.55	
issix.....	.40		.32	1.88		.22	.78	.19	.13			.22										.10	.13		.60				.62	.18			5.77	
<i>The Red Sandstone Plain.</i>																																		
ayonne.....	.10	.42	.26	3.20		.93		.04	.10			.07	.16		.01							.06			.38			.01	.68	.12			6.54	
ergen Point.....	.20	.41	.41	3.83		1.03		.06	.14	T.		.07	.17		.03	.04	T.					.05			.52		T.		.80	.11			7.87	
ounton.....	T.	1.32	.20	2.38	1.93	.62	.10	.73	.96				.23			T.													.49	.09	.11		9.55	
atham H.....		2.53	.35	3.16	.82	.67	.40	.05	.32				.38			T.	.27		T.			.10	.02		.27				.58	.20			10.31	
izabeth.....	.64		.38	4.55		.99		.02	.11	T.		T.										.28			.30			T.	.80	.15			8.22	
emington.....	.47	.62	.36	1.93		1.88		.11	.18			.37	.03		.30		T.					.02	.04			.35		.05	1.08	.28			8.07	
ighwood.....	T.	.43	.32	3.66		.73	.03	1.18	.19			.14	.41		T.		T.						.64			.44		T.	.15	.15			8.77	
rsey City**.....	.26	.21	.27	3.00	.10	1.07	.02	.05	.11			.42			T.		T.									.58		T.	.67	.09			7.08	
umbertville.....		.30	.24	4.2		1.71		.17	.43			.10	.24		.24		T.					.23	T.	T.	T.	.72		T.	.79	.34			7.70	
ttle Falls**.....	.35	.31	.37	1.41	.02	.80	.75	.13				.37										.25	.09		.30				.43	.12			8.77	
ewark**.....	.49	.22	.28	4.16	.20	1.07	T.	.02	.18	T.					T.							.02	.10		T.	.18		.04	.44	.09			7.77	
ew Brunswick.....	T.	3.18	.51	3.87		.77	.01	.08	.31			T.	.15		.06							T.	T.		T.	.90		T.	.60	.19			10.63	
erson.....	.09	.18	.78	4.43		.75	.02	.35	.21			T.	.59		.12		T.					T.	1.20		.19				.30	.12			9.21	
atfield**.....	1.32	.98	.21	3.96	.06	1.13		.06	.16			.32			.12							T.	.04		.20			.07	.59	.16			9.78	
umpton Plains H.....		.24	.04	1.97	1.74	.42	.19	.23	.52	.59		.26										.36	.56		.18				.41	.18	.11		8.03	
umerville.....	*	5.27	.22	2.37		1.19		.04	.17					.24	.21								.02			.44		T.	.51	.17			10.85	
uth Orange.....	.50	.12	.22	4.89		1.37	.01		.15			.30		.24		T.		T.				T.	.71			.42		T.	.46	.10			9.25	
ew York, N. Y.***.....	.32	.15	.31	2.06	.05	.77	.03	.05	.07			.27			T.		T.					.16	T.		T.	.22		.01	.83	.07			5.37	
<i>The Southern Interior.</i>																																		
idgeton.....	1.31	2.55	T.	1.55	.03			.07	.12	T.		1.25		1.18	.88		T.																	
rlington.....	1.70	.42	.23	2.60		.42	.05	.10	.12			.22	.10		.63													1.10		.88			10.92	
ayton.....	.16		1.70	*		3.35	.01	.02	.01			.71			.25							.01			.22		T.	.98	.58				7.78	
addonfield.....	.13	.02	.32	2.10	T.	.31	T.	1.05	.20			.53	.01		.05		T.					T.			.52			.09	.86	1.00			8.68	
ummonton.....																						T.			.07			.03	1.05	.74			6.61	
ghtstown.....	T.	.43	.10	2.58		.64		.87	.14			.16	.11		.05	.05						T.	.07			T.		T.	.99	.37			6.56	
laystown.....	.05	.40	.15	2.00	T.	.45	T.	.45	.25			.10	.25		T.							T.	.05		T.				.80	.40			5.35	
dian Mills.....	.70	T.	4.39	1.77	.03	.30		.21	.03			.07	.17		.12							T.	.05		T.	.08			.06	1.10	.62			9.70
ewood.....	.09	.05	.65	3.20		.22	.02	.32	.21			.88			.09							T.	.05						.02	1.26	.33			7.40
orestown.....	.19		.27	2.11		.21		.20	.37			.47			.04							T.	.02		.04			T.	1.05	.80			5.75	
rthfield.....	*		1.44	2.27		.24		.07					.17		.09																			
asautville.....	.25		1.18	2.34		.18		.04				.02			.47										.09			.09	1.51	.41			6.28	
enton***.....	.63	.38	.03	2.24	.88	.03	.04	.50	.04			.29	.25		.07							T.			.23			.23	1.60	.53			7.07	
ckerton.....	.40		2.28	1.97		.60		.10	.11			.08	.25		.05							T.	T.		.07			.03	.63	.30			6.22	
eland.....	1.07		1.45	1.35				.17	.01			*	1.09		.26										.12			.06	1.40	.22			7.64	
oodbine.....																												.15	.23	.61			7.40	
iladelphia, Pa.***.....	.04		2.29	1.44		.03	.05	T.				.26	.13	.62				T.								.07			.22	1.11	.22			6.48
	.13	.23	.03	2.74	.50	.02	T.	.47	.07			.46			.04							T.				.45	.02		.34	.75	.59			6.84
<i>The Sea Coast.</i>																																		
bury Park**.....	.03	.38	.03	1.01	.05	.31		.35	.19			.17			.05								.10			.09		T.	1.03	.23			4.02	
lantie City***.....	.12	1.48	.09	1.54		.07		T.	.02			.07			.26		T.												.38	.49	.46			4.98
pe May City.....	.22	.50	.20	1.17		.22		.43	.25	.10		.98	.01		.04							T.							.34	.06	.70			5.22
ng Branch**.....	.31	.14	.14	4.17	T.	.30		.67	.08			.51			.04														.34	.06	.70			5.22
udy Hook***.....	.81	.21	.41	2.72		.19		.11	.14			.30										.04	.17					T.	1.54	.18			8.29	
																						.07	.04					T.	1.62	.10			6.72	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24 hour period, midnight to midnight.
 || Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.
 * Precipitation included in the next following measurement. **Precipitation for 24 hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

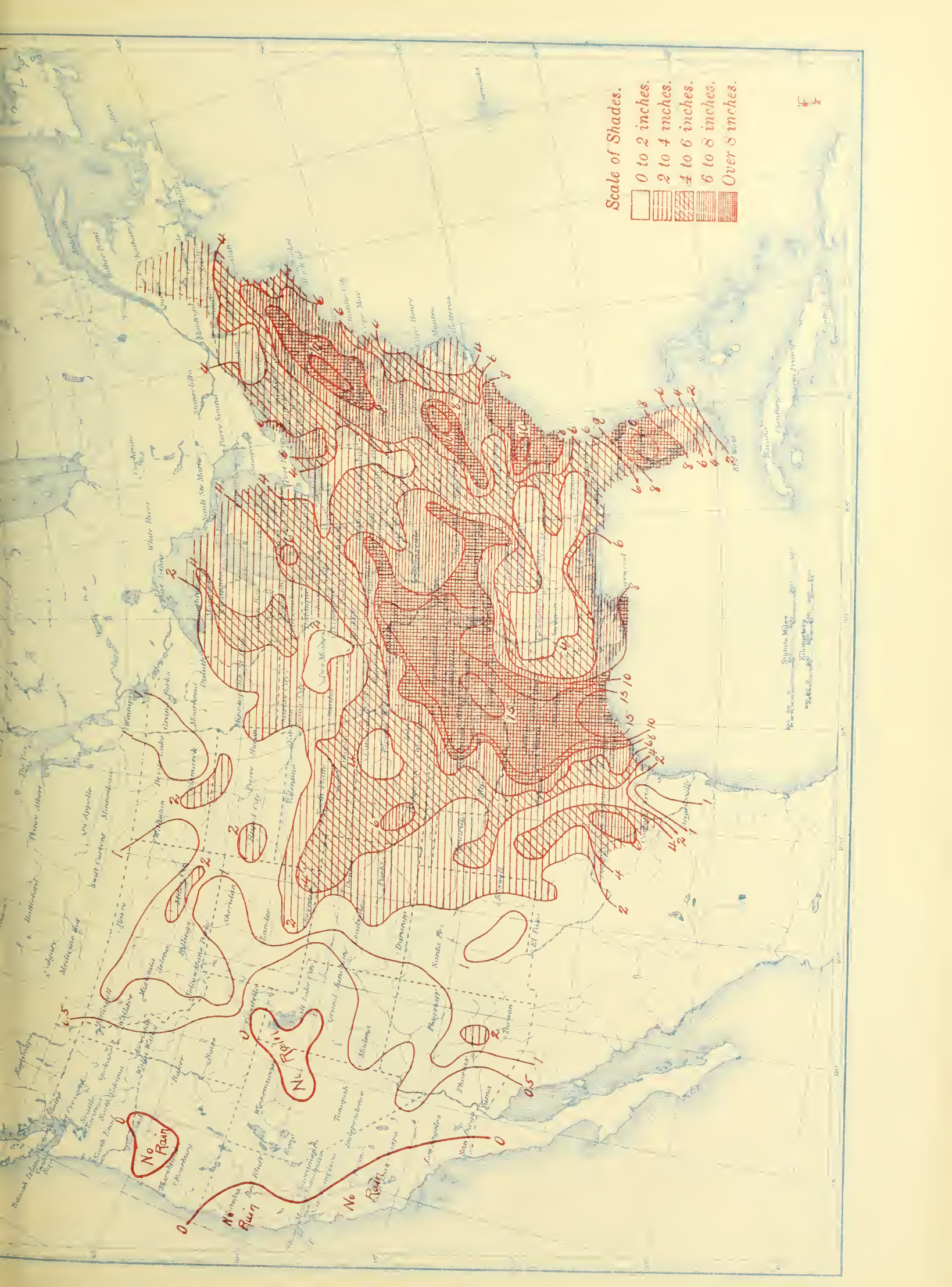
Stations.	Pressure.					Hourly velocity.	Wind.			Moisture.		Sun. shine.
	Monthly mean.	Highest.	Date.	Lowest.	Date.		Miles per hour.	Highest.		Relative humidity, per cent, at 8 a. m.	Relative humidity, per cent, at 8 p. m.	
								Direction.	Date.			
Atlantic City	29.98	30.23	27	29.77	22	z	34	s.	4	81	78	68
Bury Park												
Pe May												
Seoy City		30.22	27	29.80	22	s	38	se.	4			
ing Branch												58
wark.	29.99	30.28	27	29.76	22	13	78	e.	4	74	80	
w York, N. Y.	29.97			29.74	4		40	e.	4	76	76	
iladelphia, Pa.	29.97	30.27	27	29.75		14	64	se.	4	76	70	58
udy Hook.	29.96	30.28	27	29.74	4	9	44	s.	4	78	74	45
enton.	29.96	30.27	27	29.71	22	14	54	e.	4	76	72	61
	29.96	30.26	27	29.71	22	10	48	sw.	4	73	71	58

§ Two directions and dates.

* 7 a. m. † 9 p. m.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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a, b, c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.



Scale of Shades.

- 0 to 2 inches.
- 2 to 4 inches.
- 4 to 6 inches.
- 6 to 8 inches.
- Over 8 inches.

Scale of Miles
0 10 20 30 40 50 60 70 80 90 100

U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU

CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

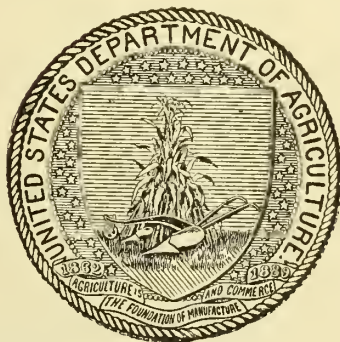
NEW JERSEY SECTION

SEPTEMBER 1915.

BY

G. HAROLD NOYES

SECTION DIRECTOR



TRENTON, N. J.
WEATHER BUREAU OFFICE
OCTOBER 15, 1915.

Departure of the Mean Temperature from the Normal, September, 1915.



Shaded portions show excess (+).
Unshaded portions show deficiency (-).
Lines show amount of excess or deficiency.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Section Director.

VOL. XXVIII. TRENTON, N. J., SEPTEMBER, 1915. No. 9.

GENERAL SUMMARY.

The months of June and September each contain a portion of astronomical summer, it may be considered that in this locality there are four "meteorological" summer months, June to September, inclusive. July averaging the warmest and September the coolest of the four. In rainfall, June and September average about equal, as do July and August, but the latter usually receive considerably more rain. The accumulated summer conditions this year in New Jersey have been about normal, but there were times when the deficiency of heat and excess of rain were strikingly apparent. September exceeded the other months in its abnormal heat and dryness, and was remarkably fine in its general weather conditions as affecting out-door interests. Rainy and cloudy days were 40 per cent. fewer than normal, and at only a few stations was there more than one thunderstorm. The particularly marked feature of September was the continuous warm period from the 4th to the 20th, when temperatures maintained thermometer readings above normal constantly, and from the 9th to the 17th, 9 days, when it was from 9° to 15° or more warmer than normal. The first and last portions of the month were but slightly cooler than normal. Prior to this year there have been but six warmer September averages in this State since records were first computed in 1885. The principal rainy periods were the night of the 6th-7th, the 14th to 19th, the 21st, and 26th. The storm of the 21st, even with its small quantity of rain, but with low barometer and high wind, was popularly considered to be the "equinoctial", though the pressure was lower and the wind more severe along the shore on the 26th. The 26th was the only day in Trenton without sunshine.

September warmth and dryness rapidly brought crops to maturity, with a yield that was about as satisfactory as might reasonably be expected. At the close of the month harvesting was approaching completion, and fall plowing was about finished. Winter wheat was up, and looked well, and pastures were in fairly good condition.

The mean stage of the Delaware River at Phillipsburg was 2 feet, the highest being 4.2 feet on the 23d. At Trenton the stage was 1.6 feet, which was 0.4 foot above normal; the highest was 2.5 feet on the 1st.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 37 stations, was 68.5°, which was 2.8° above normal. Every portion of the State was above normal, the greatest departure being in northern districts. The coolest portions were the northern counties, and central sections between the Delaware and the shore. The highest temperature of the month was 97° at Elizabeth on the 9th; and the lowest, 30° at Charlotteburg on the 23d. The greatest daily range of temperature was 46° at Charlotteburg on the 3d. The highest monthly mean temperature was 70.8° at Jersey City; and the lowest, 5.4 at Charlotteburg. The warmest portions of the State were

the three southwestern counties. On the 23d, 28th, 29th, and 30th, temperatures fell below freezing at the surface of many cranberry bogs.

PRECIPITATION.

The average rainfall for the State, as deduced from observations of 43 stations, was 2.08 inches, which was 1.86 inches below normal. The greatest amount was 4.46 inches at Boonton; and the least, 0.55 inch at Inlaystown. The greatest amount in 24 consecutive hours was 2.33 inches at Boonton on the 21st. The average number of days on which 0.01 inch or more of rain fell was 5, which was 3 fewer than normal. With the exception of Sussex and the northern portion of Passaic counties, the northern third of the State was the wettest, and portions of Mercer and Monmouth the driest.

WIND.

The prevailing wind direction was southwest, with an average velocity of about 10 miles per hour. The highest wind velocity for five consecutive minutes was at the rate of 64 miles per hour from the northwest at Long Branch on the 26th. The wind continued high along the shore on the 27th, and was also high on the 21st near the coast.

SUNSHINE AND CLOUDINESS.

The average number of clear days throughout the State was 17; partly cloudy, 9; cloudy, 4; which was 3 more clear, and 2 fewer cloudy than normal. Sunshine averaged 70 per cent., which was somewhat above normal.

MISCELLANEOUS.

Atmospheric pressure, reduced to sea level, was 30.08 inches, which was 0.01 inch above normal. The highest pressure readings occurred on the 23d, and the lowest on the 21st and 26th. The first light frost was very general on the 23d, and it again occurred scatteringly on the 28th, 29th, and 30th. There was some hail at Dover on the 9th, during the thunder shower. The other dates of general occurrence of thunder showers were the 17th, and 21st. The principal dates of dense fog were the 8th, 9th, 13th, and 20th. Solar halos were observed on the 2d, 3d, and 30th. The aurora was observed at Lakewood on the 28th.

COMPARATIVE DATA FOR SEPTEMBER.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Cloudy.	Partly cloudy.	.01 inch or more prec.
1885.....	64.2	93	38	0.83	1.69	0.25	.....	.....	.....	.....
1886.....	66.9	95	36	1.13	1.76	0.86	.....	.....	.....	.....
1887.....	67.6	90	30	3.66	6.25	1.62	.....	.....	.....	7
1888.....	63.1	84	29	7.09	10.65	7.75	.....	.....	14	12
1889.....	64.8	90	34	8.36	13.13	3.17	.....	.....	14	14
1890.....	64.4	91	33	4.75	8.61	2.59	10	10	10	10
1891.....	68.7	95	39	2.46	5.91	0.90	16	9	5	6
1892.....	64.2	90	33	1.81	3.78	1.02	15	11	4	7
1893.....	62.7	90	31	3.20	5.38	1.93	12	10	8	8
1894.....	68.8	97	31	7.46	11.65	3.69	10	10	10	8
1895.....	69.7	109	29	1.07	2.71	0.22	17	10	3	5
1896.....	65.1	95	30	4.37	8.74	2.26	19	7	4	5
1897.....	65.5	99	30	1.65	3.97	0.21	16	7	4	5
1898.....	68.6	100	31	2.00	3.87	0.65	17	9	5	6
1899.....	64.4	93	30	5.88	9.61	2.88	15	9	6	9
1900.....	69.9	98	32	2.86	7.37	1.09	14	10	6	10
1901.....	66.8	94	29	3.38	6.82	1.63	15	9	6	10
1902.....	64.6	93	30	5.65	8.95	3.11	11	12	13	13
1903.....	65.0	92	29	3.34	7.10	1.39	17	7	5	7
1904.....	64.8	93	23	4.79	10.08	0.89	14	10	6	7
1905.....	65.4	90	28	5.23	9.18	2.87	16	7	7	7
1906.....	67.1	94	33	2.19	4.66	0.75	15	9	6	7
1907.....	67.1	92	31	8.08	12.95	3.55	10	8	12	14
1908.....	65.7	90	29	2.09	4.13	0.95	11	10	9	2
1909.....	64.5	89	30	3.30	4.58	2.08	11	10	9	8
1910.....	67.3	97	32	2.39	3.97	1.01	12	10	8	6
1911.....	66.4	90	30	2.88	5.33	1.08	10	12	8	9
1912.....	65.9	87	28	4.47	6.76	2.68	12	11	11	10
1913.....	64.4	96	27	3.87	6.55	1.56	13	8	9	9
1914.....	64.0	99	24	<i>0.37</i>	<i>1.61</i>	<i>0.14</i>	21	6	3	3
1915.....	68.5	97	30	2.08	4.46	0.55	17	9	4	5

Climatological data for September, 1915.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation, 0.1 in. or more.	Clear.	Pt. cloudy.			Cloudy.
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	24	67.4	+2.3	90	†15	37	23	34	3.45	-0.47	1.68	0	4	24	3	3	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	23	65.4	+3.1	92	9	30	23	46	2.70	-1.98	1.35	0	4	21	7	2	nw.	George S. Briggs.
Culvers Lake††.....	Sussex.....	848	14	.....	.....	.....	.....	32	23	.....	2.73	-1.08	1.15	0	7	24	3	3	e.	Brice E. Riker.
Dover.....	Morris.....	600	31	66.0	+3.4	91	†14	35	23	34	3.74	-0.74	1.27	0	7	.....	.....	.....	.....	William C. Harris.
Layton.....	Sussex.....	480	15	66.5	+4.7	93	16	32	29	40	2.12	-1.75	1.02	0	9	18	5	7	sw.	A. M. Depue.
Newton.....	Sussex.....	678	35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	D. Wilson Smith.
Phillipsburg.....	Warren.....	363	33	69.1	+3.7	94	14	38	23	36	3.23	-0.55	1.57	0	7	22	6	2	n.	George Dynlock.
Sussex.....	Sussex.....	442	25	66.7	+2.8	93	16	35	†23	38	3.04	-0.87	1.48	0	6	18	5	7	sw.	
Means and extremes...				66.8	+3.3	94	14	30	23	46	3.00	-1.06	1.68	0	6	21	5	4	sw.	
<i>The Red Sandstone Plain.</i>																				
Bayonne.....	Hudson.....	50	25	.....	.....	.....	.....	43	30	.....	1.99	-1.90	.....	0	4	.....	.....	.....	.....	Erskine R. Eadie.
Bergen Point††.....	Hudson.....	37	18	69.1	+2.4	95	†9	40	23	30	1.92	-2.61	.....	0	4	11	16	3	nw.	William H. Mitchell.
Boonton.....	Morris.....	400	§25	67.1	.....	95	9	35	†23	41	4.46	-0.03	2.33	0	7	25	0	5	sw.	J. W. Demmers.
Chatham.....	Morris.....	234	13	.....	.....	.....	.....	.....	.....	.....	3.07	-1.06	0.75	0	7	24	2	4	w.	Miss M. A. Butler.
Elizabeth.....	Union.....	45	36	70.0	+3.0	97	9	37	†23	39	2.24	-1.82	1.35	0	6	17	11	2	w.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	27	69.2	+4.1	94	9	39	†23	40	3.86	-0.12	1.49	0	5	19	9	2	sw.	Hiram E. Deats.
Highwood.....	Bergen.....	90	26	66.4	+2.2	90	16	36	30	32	2.18	-1.98	1.07	0	4	8	20	2	nw.	Charles J. Bates.
Jersey City.....	Hudson.....	10	16	70.8	+3.6	94	9	45	28	28	2.91	-0.80	1.30	0	7	13	14	3	nw.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	28	69.6	+3.6	92	14	42	30	31	1.33	-2.85	0.81	0	3	17	10	3	sw.	Samuel W. Cochran.
Little Falls.....	Passaic.....	180	§12	66.5	.....	91	9	36	30	35	3.51	-1.09	1.90	0	6	23	0	7	w.	Montclair Water Co.
Newark.....	Essex.....	159	73	69.4	+3.5	93	9	45	†23	28	3.01	-0.84	1.51	0	7	15	9	6	n.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	110	62	68.4	+2.4	91	†9	39	23	34	2.06	-1.79	0.75	0	4	15	14	1	se.	N. J. Experiment Station.
Paterson.....	Passaic.....	80	44	69.7	+3.5	95	16	42	23	34	3.20	-1.24	1.40	0	4	9	19	2	sw.	Heber A. Probert.
Plainfield.....	Union.....	100	29	68.1	+2.9	91	†9	38	23	34	2.06	-2.39	1.11	0	7	10	16	4	sw.	John Neagle.
Pompton Plains.....	Morris.....	195	13	.....	.....	.....	.....	.....	.....	.....	3.39	-1.16	2.06	0	5	.....	.....	.....	.....	M. S. Taylor.
Somerville.....	Somerset.....	60	33	67.9	+2.6	93	9	37	†23	41	2.25	-1.41	1.04	0	5	15	11	4	nw.	A. A. Maedonald.
South Orange.....	Essex.....	200	45	67.5	+3.4	89	9	41	23	29	2.90	-1.19	1.33	0	5	12	17	1	nw.	Dr. W. J. Chandler.
New York, N. Y.....	Essex.....	365	45	69.0	+2.5	90	9	44	28	23	2.52	-1.07	1.27	0	6	11	13	6	nw.	U. S. Weather Bureau.
Means and extremes...				68.6	+3.1	97	9	35	†23	41	2.73	-1.43	2.33	0	5	16	11	3	sw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	34	70.3	+2.1	94	†9	39	28	35	1.41	-2.40	.....	0	2	20	5	5	w.	Henry A. Jorden.
Burlington.....	Burlington.....	12	§29	70.4	.....	94	†9	41	30	34	1.33	-2.59	0.51	0	7	.....	.....	.....	nw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	George L. Wilson.
Haddonfield.....	Camden.....	75	28	69.0	+3.0	92	†9	38	23	35	0.86	-2.88	0.40	0	4	8	19	3	sw.	Prof. Chas. F. Richardson.
Hammonton.....	Atlantic.....	103	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Hightstown.....	Mercer.....	140	23	68.3	+1.7	94	14	36	30	39	1.33	-2.55	0.64	0	4	.....	.....	.....	w.	Chas. W. Dunbar.
Imlaystown.....	Monmouth.....	185	27	67.6	+0.9	94	14	35	23	36	0.55	-3.76	0.30	0	2	16	9	5	s.	H. E. Bullock.
Indian Mills.....	Burlington.....	76	26	68.6	+2.5	95	14	34	23	40	0.97	-3.20	0.72	0	3	17	11	2	sw.	James M. Armstrong.
Lakewood.....	Ocean.....	54	12	66.6	.....	90	†9	34	29	34	2.85	.....	1.70	0	5	12	11	7	sw.	R. W. Holman.
Moorestown.....	Burlington.....	75	53	69.4	+3.4	92	14	40	23	35	0.69	-3.07	0.38	0	4	17	11	2	sw.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	8	.....	.....	.....	.....	.....	.....	.....	0.92	.....	0.47	0	2	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	17	.....	.....	.....	.....	.....	.....	.....	0.85	-2.56	0.57	0	2	.....	.....	.....	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	44	69.4	+2.5	91	9	43	29	29	0.62	-2.97	0.36	0	8	11	11	8	nw.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	22	69.0	+3.0	95	17	36	†28	37	2.78	-0.58	2.23	0	3	20	6	4	se.	Frank R. Austin.
Vineland††.....	Cumberland.....	87	47	70.2	+3.3	93	9	36	28	432	1.47	-2.37	0.77	0	4	.....	.....	.....	.....	E. V. C. Hendrieckes.
Woodbine.....	Cape May.....	43	24	69.2	+2.9	92	9	37	29	33	0.77	-3.26	0.62	0	4	26	2	2	se.	Baron de Hirsch Agr. Sch.
Philadelphia, Pa.....	.....	117	45	71.4	+4.0	92	9	47	28	22	0.46	-2.92	0.18	0	6	12	10	8	nw.	U. S. Weather Bureau.
Means and extremes...				69.0	+2.5	95	†14	34	†23	40	1.24	-2.68	2.23	0	4	16	10	4	sw.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	26	67.6	+0.7	91	17	40	28	28	0.60	-2.64	0.37	0	5	16	9	5	w.	Wilbur H. Panoast.
Atlantic City.....	Atlantic.....	16	42	69.6	+2.0	92	9	41	28	29	0.60	-2.45	0.36	0	2	18	3	9	sw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	31	70.0	+1.0	92	9	45	23	23	0.70	-2.30	0.35	0	4	17	10	3	nw.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	8	69.0	.....	96	9	40	28	34	1.69	.....	1.15	0	4	17	7	6	nw.	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	17	69.5	+2.1	92	9	48	28	22	1.02	-3.02	0.77	0	4	15	10	5	nw.	U. S. Weather Bureau.
Means and extremes...				69.1	+1.4	96	9	40	28	34	0.92	-2.60	1.15	0	4	16	8	6	nw.	
For the State.....				68.5	+2.8	97	9	30	23	46	2.08	-1.86	2.33	0	5	17	9	4	sw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

* Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne Vineland; is South Vineland.

Daily precipitation for September, 1915.

Stations.	Day of month.																															Total.		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
<i>The Highlands and Kittatinny Valley.</i>																																		
Belvidere.....							.13										.30	1.34	1.68														3.45	
Charlotteburg.....					.05			.18	.13	T.							.02	1.15	1.35							.15							2.70	
Culvers Lake.....					.01					T.							.02	1.15	1.05							.19							2.73	
Dover.....					.02	.07				1.01							.03	1.25	1.27							.09							3.74	
Layton.....					.03	T.	.17	.10				.02	T.				.02	1.02	.61					T.		.13	.02						2.12	
Newton.....																																		
Phillipsburg.....						.02	.21		.05								.05	1.30	1.57								.03	T.					3.23	
Sussex.....							.18							.22			.01	1.05	1.48							.10							3.04	
<i>The Red Sandstone Plain.</i>																																		
Bayonne.....							*											1.27	.70							.02						1.99		
Bergen Point.....					T.													1.29	.61							.02						1.92		
Boonton.....						.01	.13			.61							T.	1.30	.02	1.53	.80				T.		.06						4.46	
Chatham H.....					T.	.22											.68	.70	.12	.53	.75					.07						3.07		
Elizabeth.....							.03	T.									.10	1.35	.75							.01							2.24	
Flemington.....					T.		.12										.88	1.49	1.37													3.86		
Highwood.....					T.		.12		T.								T.	1.07	.90					T.		.09							2.18	
Jersey City**.....					T.	.01	.04		.01								.88	T.	1.30	.65						.02							2.91	
Lambertville.....																	.13	.39	.81													1.33		
Little Falls**.....					T.	.25			.05								.05	1.20	1.90							.06							3.51	
Newark**.....					T.	.02	.01		.24								.15	.14	1.37	1.08													3.01	
New Brunswick.....							.55										.15	.75	.61							T.							2.06	
Paterson.....					T.	T.	.46		T.								T.	1.28	1.40					T.		.06							3.20	
Plainfield**.....					.01	.14	T.										.08	.03	1.08	.69						.03							2.06	
Rompton Plains H.....					T.	.11												1.11	.97	1.09						.11							3.39	
Romerville.....							.09										*	.11	1.04	1.01													2.25	
South Orange.....						.20			.15								.15	1.33	1.07														2.90	
New York, N. Y.***.....					T.	.01	.02		T.								.46	.02	1.25	.76													2.52	
<i>The Southern Interior.</i>																																		
Bridgeton.....											T.							*	1.41													1.41		
Burlington.....							.16					.08					.51	.05	.36							.02							1.33	
Layton.....																	.29	T.	.09	.40														
Laddonfield.....							T.					.08																					0.86	
Lammonton.....																																		
Lightstown.....							.15										.07	.47	.64														1.33	
Maytown.....						T.											T.	.25	.30							T.							0.55	
Indian Mills.....							.20				.05						.20	.72	.72							T.							0.97	
Lakewood.....							1.70	T.				.06					.02	.56	.55							T.	.02						2.85	
Loorestown.....																	.12	.13	.38							T.							0.69	
Northfield.....																		.47	.45														0.92	
Pleasantville.....																		.57	.28														0.85	
Renton***.....					T.	.04	.02			.01							.03	.09	.27	.15							.01							0.62
Rockertown.....											.18						.37	.23	2.23														2.78	
Shineland.....											*						.68	.77										.02					1.47	
Woodbine.....							.02		T.									.12	.62	.62													0.77	
Philadelphia, Pa.***.....					T.	.03					.08						.08	.05	.04	.18								.01						0.46
<i>The Sea Coast.</i>																																		
Asbury Park**.....						T.	T.	T.									.01	T.	.37	.20	.01						.01						0.60	
Atlantic City***.....		T.									T.							.36	.24							T.							0.60	
Cape May City***.....		.01															.02	.32	.35							T.							0.70	
Long Branch**.....					T.												.01	T.	1.15	.50							.03						1.69	
Andy Hook***.....					T.		.02										.05	T.	.77	.18							T.							1.02

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24 hour period, midnight to midnight.

|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.

* Precipitation included in the next following measurement. ** Precipitation for 24 hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.				Moisture.		Sun. shine.
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	Percentage of possible sunshine.
							Miles per hour.	Direction.	Date.			
Atlantic City	30.10	30.40	23	29.63	21	7	24	s.	21	83	76	81
Asbury Park	30.11	30.42	23	29.72	21	8	28	nw.	21			
Aspe May	30.08	30.41	23	29.56	26	13	64	nw.	26	83	78	72
Jersey City	30.07	30.43	23	29.58	26	15	45	w.	21	*69	158	69
Long Branch	30.09	30.42	23	29.62	21	9	72	nw.	26	76	66	70
Newark	30.07	30.41	23	29.56	26	15	34	nw.	26	77	73	60
New York, N. Y.	30.07	30.40	23	29.62	21	10	51	nw.	26	84	80	73
Philadelphia, Pa.	30.07	30.40	23	29.62	21		37	nw.	21	82	71	65
Andy Hook												
Renton												

§ Two directions and dates.

* 7 a. m. † 4 p. m.

Daily temperature for September, 1915.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
<i>The Highlands and Kittatinny Valley.</i>																																	
Belvidere.....	Maximum	72	76	84	85	77	83	84	85	89	88	88	81	86	89	90	90	89	81	75	79	72	65	69	70	79	68	66	66	72	73	79.0	
	Minimum	46	51	51	58	65	63	66	70	64	65	65	62	66	71	68	67	65	62	56	50	60	46	37	39	47	56	44	40	38	39	55.9	
Charlotteburg.....	Maximum	70	78	89	85	78	79	82	85	92	84	84	80	83	91	89	91	88	81	76	79	72	63	66	71	73	69	65	61	66	69	78.0	
	Minimum	45	44	43	54	63	61	64	67	59	64	50	57	59	64	65	65	62	53	61	58	46	30	35	46	47	43	48	42	36	..	52.7	
Dover.....	Maximum	69	75	83	87	74	79	82	86	90	85	86	80	83	91	90	91	89	79	69	79	70	61	66	71	71	66	60	63	70	69	77.1	
	Minimum	49	49	49	58	62	62	67	69	63	61	66	60	61	68	70	67	62	60	58	54	50	43	35	38	48	55	43	39	40	38	54.8	
Layton.....	Maximum	74	80	87	84	76	82	85	85	92	87	87	82	86	90	91	93	91	82	77	78	70	64	67	72	74	66	66	65	70	73	79.2	
	Minimum	42	49	52	57	64	58	64	60	64	61	55	63	62	67	66	68	62	57	62	54	58	45	35	39	43	49	45	40	32	33	53.8	
Newton.....	Maximum	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
	Minimum	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Phillipsburg.....	Maximum	72	77	87	87	89	83	86	89	92	89	89	85	90	94	93	93	92	81	77	82	76	65	70	74	76	69	67	66	71	72	80.8	
	Minimum	53	53	51	58	65	64	66	68	65	66	60	63	67	71	69	66	66	62	65	57	61	46	38	42	52	57	46	41	42	42	57.4	
Sussex.....	Maximum	71	78	87	83	75	82	84	88	92	84	84	83	86	91	91	93	90	83	80	80	70	62	68	71	75	65	66	61	68	71	78.7	
	Minimum	43	47	49	59	65	61	63	69	64	65	56	59	65	70	68	68	65	59	61	55	57	45	35	41	45	53	44	39	36	65	54.7	
<i>The Red Sandstone Plain.</i>																																	
Bayonne.....	Maximum	72	77	85	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	72	..	..	67	67	75	..	73	72	65	70	70	..	
	Minimum	53	56	55	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	63	..	..	50	50	49	..	54	47	45	47	43	..	
Bergen Point.....	Maximum	72	77	85	89	79	79	82	85	95	89	89	80	85	92	91	95	94	81	71	79	74	60	69	76	72	70	69	65	73	70	79.9	
	Minimum	56	55	52	59	70	66	69	69	66	66	62	67	62	68	71	68	64	59	58	56	48	40	46	52	56	46	44	43	42	..	58.3	
Boonton.....	Maximum	71	80	88	90	86	84	86	88	95	87	88	84	86	91	89	90	91	82	76	81	74	63	63	74	75	74	69	56	66	65	79.7	
	Minimum	46	51	47	56	65	66	67	70	65	66	55	60	60	66	65	66	61	60	63	52	62	49	35	39	42	50	41	43	39	65	54.5	
Elizabeth.....	Maximum	74	81	87	92	79	83	84	88	97	94	91	83	83	95	94	95	95	86	76	80	79	70	72	77	78	69	69	71	76	76	82.4	
	Minimum	52	54	50	62	67	63	66	70	68	68	61	63	63	68	70	68	68	67	62	60	64	45	37	42	49	52	45	41	40	37	80.8	
Flemington.....	Maximum	70	76	89	84	79	82	85	88	94	90	92	86	91	92	92	91	92	82	81	78	82	74	68	76	77	70	69	66	71	73	77.7	
	Minimum	51	55	49	58	66	65	66	69	65	67	60	65	66	71	70	66	68	65	65	66	61	48	39	43	54	53	45	43	42	39	76.3	
Highwood.....	Maximum	68	74	81	83	75	78	80	84	89	85	85	77	82	88	88	90	88	78	70	76	71	63	65	70	69	68	67	62	68	66	80.3	
	Minimum	50	53	49	57	65	64	69	71	66	65	56	61	62	67	71	70	68	63	62	58	57	46	37	42	74	72	70	67	72	70	61.4	
Jersey City.....	Maximum	73	79	86	90	83	85	84	85	94	90	90	82	86	90	90	93	93	81	74	80	72	67	68	74	73	73	71	68	64	69	78.8	
	Minimum	55	58	58	65	66	68	70	72	69	72	66	68	69	72	74	72	72	66	65	60	61	50	46	51	56	58	47	45	44	42	60.8	
Lambertville.....	Maximum	70	71	83	82	78	82	84	88	91	88	88	85	89	92	90	89	89	80	74	80	72	67	67	73	73	71	68	64	69	67	78.3	
	Minimum	52	56	52	60	67	67	69	71	67	71	64	66	69	74	74	71	70	67	66	61	66	50	43	43	43	41	41	42	38	..	54.7	
Little Falls.....	Maximum	72	78	85	87	81	82	84	87	91	85	80	82	86	90	90	90	89	80	74	78	72	63	65	73	71	68	61	62	67	68	78.4	
	Minimum	47	50	50	57	61	64	64	66	63	60	56	61	68	68	68	65	69	61	58	55	52	41	37	40	46	51	45	41	42	41	60.5	
Newark.....	Maximum	69	75	84	89	76	80	82	84	83	89	89	78	83	91	92	91	91	79	73	79	72	64	66	72	73	68	63	66	70	71	78.5	
	Minimum	53	57	56	62	69	66	70	70	68	73	68	67	68	72	73	70	70	66	62	61	55	50	45	49	55	56	48	45	45	47	58.3	
New Brunswick.....	Maximum	69	74	83	85	80	79	80	85	91	87	88	78	84	90	90	90	91	78	72	79	76	65	67	74	72	70	70	64	70	75	80.5	
	Minimum	52	55	50	58	67	66	68	67	67	70	61	67	65	70	72	67	69	64	63	58	64	46	39	45	53	55	46	42	43	41	..	
Paterson.....	Maximum	71	77	88	88	80	83	81	86	94	90	90	85	93	93	95	92	83	73	80	73	69	70	74	76	69	68	68	73	73	73	78.8	
	Minimum	52	54	54	61	68	63	67	71	69	67	61	65	64	70	71	70	65	63	58	65	49	42	45	50	55	46	43	44	43	..	57.4	
Plainfield.....	Maximum	70	76	84	87	78	81	81	86	91	88	88	80	85	91	90	91	79	73	79	72	79	74	65	67	74	72	70	69	65	71	72	80.6
	Minimum	53	56	50	57	68	64	69	70	67	68	59	64	65	69	70	67	67	64	63	56	58	47	38	42	51	54	46	41	42	37	55.2	
Somerville.....	Maximum	74	75	87	89	84	83	84	88	93	89	89	85	87	92	92	91	91	82	74	82	75	65	69	76	75	70	69	65	71	72	86.4	
	Minimum	51	54	46	55	65	65	65	67	62	66	57	61	62	68	67	62	61	62	63	56	61	45	37	39	48	51	45	44	44	42	..	
South Orange.....	Maximum	69	74	81	85	77	80	81	84	89	85	85	78	82	87	88	87	88	77	71	77	71	62	64	71	71	68	65	61	67	67	58.6	
	Minimum	54	58	52	62	67	64	68	71	67	69	61	64	65	68	71	69	68	65	62	61	55	46	41	45	54	54	46	44	44	42	76.6	
New York, N. Y.....	Maximum	70	77	83	87	78	76	77	82	90	86	87	76	82	86	88	88	77	72	78	73	63	64	71	70	69	62	63	68</				



U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU
CHARLES F. MARVIN, CHIEF

NOV 24 1915

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

OCTOBER, 1915.

BY
G. HAROLD NOYES
SECTION DIRECTOR



TRENTON, N. J.
WEATHER BUREAU OFFICE
NOVEMBER 18, 1915.

Departure of the Mean Temperature from the Normal, October, 1915.



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Section Director.

VOL. XXVIII. TRENTON, N. J., OCTOBER, 1915. No. 10.

GENERAL SUMMARY.

The fine autumn weather of September continued throughout October, except that there was a greater frequency and amount of rain in October. But general conditions were warmer and drier than normal, and the decrease in heat from September to October was about the same number of degrees as usual. In many respects the weather of the month averaged much like that of April of this year, and October five years ago. There were two moderately cool periods during the month, the first coming from the 1st to the 12th, except the 5th, and on the 23d, 24th, and 25th. The lowest temperatures were generally reported on the 11th, 24th, or 25th; in many instances the first killing frost of the fall occurred on some of these dates, but there were many localities where killing frost had not occurred up to the close of the month. Most of the rainy days occurred in the cooler portions of the month, although it rained during the storm that produced the warm wave of the 20th-21st, and the warm weather thundershower occurred on the night of the 26th-27th. The other rainy days were the 1st, 2d, from the 3d to the 8th, and the 14th-15th.

There was more clear sky and consequently more sunshine than usual, and this, in the season when there is more clear sky than at any other time of the year, rendered the month particularly favorable for out-of-door pursuits.

Late crops, such as sweet potatoes, cranberries, tomatoes, and corn had matured or been harvested mostly without injury before the occurrence of the cold weather, and all fall farming operations had been carried well forward at the close of the month.

The mean stage of the Delaware River at Phillipsburg was 7.7 feet, the highest being 2.6 feet on the 8th. At Trenton the mean stage was 1.3 feet, which was 0.2 foot below normal: the highest was 1.8 feet on the 19th.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 39 stations, was 56.2°, which was 2.1° above normal. The northern half of the State was about 3° colder than the southern and seacoast portions, although low mean temperatures prevailed well to the southward in the "Pines." The highest temperature was 84° at Elizabeth on the 15th; and the lowest, 23° at Charlotteburg on the 25th. The lowest mean temperature was 52.2° at Dover; and the highest, 59.4° at Cape May City. The greatest daily range of temperature was 43° at Layton and Somerville on the 13th and 12th, respectively. Temperatures were everywhere higher than normal, except at Cape May City and along portions of the central coast districts; western portions of the State experienced greater departures above normal than the eastern.

PRECIPITATION.

The average rainfall of the State, as deduced from observations of 43 stations, was 3.03 inches, which was 0.70 inch below normal. Along the southeastern shore was the only portion of the State where the rain was above normal, and the driest section was in Mercer County and adjoining districts. The greatest monthly amount was 5.18 inches at Tuckerton; and the least, 1.89 inches at Lambertville. The first snow flurries of the season were reported at Culvers Lake, Highwood, and Newark on the 30th, but the amount was hardly noticeable. The greatest amount of rain in 24 consecutive hours was 1.34 inches at Tuckerton on the 15th. The average number of days throughout the State, on which 0.01 inch or more rain fell, was 9, which was 1 more than normal.

WIND.

The prevailing wind direction for the month was from the northwest, with an approximate velocity of 11 miles per hour. The highest velocity for five consecutive minutes was 63 miles per hour from the northwest at Long Branch on the 30th. High winds were also reported on the 1st, 23d, and 26th.

SUNSHINE AND CLOUDINESS.

The average number of clear days throughout the State was 17, which was 3 above normal; partly cloudy, 7, which was 1 less than normal; cloudy, 7, which was 2 less than normal. Sunshine averaged 62 per cent., which was slightly more than normal.

MISCELLANEOUS.

Atmospheric pressure, reduced to sea level, was 30.11 inches, which was 0.04 inch above normal. Highest readings occurred on the 11th, and the lowest on several dates. Thunderstorms occurred very generally on the 26th, and scatteredly on the 15th-16th. Dense fog occurred in some parts of the State on portions of the 4th, 9th, 13th to 15th, 17th to 21st, and 26th to 29th. Lunar halo was observed on the 17th.

COMPARATIVE DATA FOR OCTOBER.

Year.	Temperature.			Precipitation.			No. of days.				
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Cloudy.	Partly cloudy.	.01 inch or more precip.	
1885.	54.2	82	29	4.20	5.85	2.91				7	
1886.	55.6	82	21	3.22	8.16	2.02				7	
1887.	52.3	89	21	2.61	5.00	1.58				7	
1888.	49.3	73	25	4.73	7.00	2.97			10	12	
1889.	50.8	82	23	3.80	5.03	2.42			12	11	
1890.	53.9	81	24	6.33	10.18	3.40	9	8	14	13	
1891.	52.8	92	18	3.44	5.57	1.88	11	11	9	8	
1892.	53.6	85	21	0.52	1.09	0.04	14	12	5	4	
1893.	55.2	85	17	4.22	6.59	1.74	15	7	9	7	
1894.	55.3	87	27	5.67	8.23	3.90	12	7	12	10	
1895.	49.9	83	18	3.60	5.53	1.62	19	7	5	5	
1896.	51.5	82	21	2.24	4.58	1.27	11	8	12	7	
1897.	55.8	95	22	2.43	6.49	0.87	14	8	9	7	
1898.	56.5	88	24	5.76	8.42	3.92	13	9	9	10	
1899.	56.6	86	18	2.72	4.65	1.07	13	10	8	6	
1900.	59.9	92	19	3.70	6.59	1.47	10	8	13	10	
1901.	54.4	82	21	1.93	4.45	0.87	17	7	6	4	
1902.	56.0	80	20	6.39	9.35	3.82	15	7	9	8	
1903.	55.9	86	24	8.92	16.19	4.17	13	9	9	8	
1904.	51.9	89	15	3.78	7.01	1.50	20	6	5	5	
1905.	55.5	90	17	2.71	4.83	0.75	18	7	6	7	
1906.	55.0	80	11	4.46	7.14	2.66	8	9	14	11	
1907.	50.6	80	18	4.46	7.18	2.70	22	5	4	7	
1908.	57.3	92	19	2.71	5.14	1.30	15	5	11	8	
1909.	51.2	84	18	1.18	1.82	0.40	17	7	7	8	
1910.	57.2	90	18	3.15	5.55	1.55	15	8	8	7	
1911.	53.9	80	18	5.49	8.23	2.61	10	9	12	12	
1912.	57.0	88	25	3.30	6.95	1.72	17	8	6	5	
1913.	57.8	83	25	7.79	13.84	2.70	12	9	10	11	
1914.	58.1	88	19	1.99	3.08	0.90	13	9	9	5	
1915.	56.2	84	23	3.03	5.18	1.89	17	7	7	9	

Climatological data for October, 1915.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation 50 in. or more.	Clear.	Pt. cloudy.			Cloudy.
The Highlands and Kittatinny Valley.																				
Belvidere.....	Warren.....	289	24	55.1	+2.6	82	15	27	25	36	3.04	-0.80	1.00	0	6	18	6	7	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	23	52.4	+2.0	75	21	23	25	39	3.22	-1.19	.....	0	8	21	7	3	nw.	George S. Briggs.
Culvers Lake†.....	Sussex.....	848	14	.....	.....	.....	.....	24	11	.....	3.27	-0.38	0.98	T.	10	20	6	5	e.	Brice E. Riker.
Dover.....	Morris.....	600	31	52.2	+1.5	77	†15	26	25	35	3.57	-0.43	.....	0	7	.....	.....	.....	.....	William C. Harris.
Layton.....	Sussex.....	480	15	53.4	+3.8	80	15	24	25	43	2.98	-0.35	1.21	0	11	15	5	11	sw.	A. M. Depue.
Newton.....	Sussex.....	678	35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Phillipsburg.....	Warren.....	363	33	56.3	+3.4	82	15	29	25	35	3.49	-0.11	1.21	0	8	21	1	9	s.	D. Wilson Smith.
Sussex.....	Sussex.....	442	25	53.8	+1.6	81	15	27	11	35	.....	0.68	.....	0	.....	21	2	8	sw.	George Dymock.
Means and extremes...		.....	.....	53.9	+2.5	82	15	23	25	43	3.26	-0.54	1.21	0	8	19	5	7	sw.	
The Red Sandstone Plain.																				
Bayonne.....	Hudson.....	50	25	56.8	+1.5	80	15	35	25	29	2.34	-1.31	0.96	0	9	.....	.....	.....	n.	Erskine R. Eadie.
Bergen Point†.....	Hudson.....	37	18	56.1	+1.8	80	15	32	24	32	4.07	-0.01	1.11	0	9	10	16	5	nw.	William H. Mitchell.
Boonton.....	Morris.....	400	25	53.5	.....	74	†21	28	†11	43†	3.26	-0.58	0.91	0	10	20	5	6	sw.	J. W. Demmers.
Chatham.....	Morris.....	234	13	.....	.....	.....	.....	.....	.....	.....	3.60	-0.07	1.03	0	8	19	4	8	nw.	Miss M. A. Butler.
Elizabeth.....	Union.....	45	36	57.0	+2.3	84	15	28	25	38	2.72	-1.10	1.10	0	10	14	11	6	nw.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	27	56.8	+2.7	80	†15	30	25	38	2.35	-1.10	0.46	0	11	19	5	7	sw.	Hiram E. Deats.
Highwood.....	Bergen.....	90	26	53.4	+0.7	76	21	27	25	32	3.25	-1.28	1.26	T.	12	12	11	8	nw.	Charles J. Bates.
Jersey City.....	Hudson.....	10	16	57.4	+1.8	78	15	36	25	23	2.55	-1.20	1.06	0	9	14	10	7	nw.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	28	58.0	+4.4	77	15	34	25	29	1.89	-1.98	0.51	0	8	14	13	4	nw.	Samuel W. Cochran.
Little Falls.....	Passaic.....	180	112	53.5	.....	78	†14	30	†11	33	3.33	-0.51	0.85	0	9	.....	.....	.....	w.	Montclair Water Co.
Newark.....	Essex.....	159	73	56.3	+1.9	80	15	35	25	28	2.87	-0.90	1.09	T.	9	14	3	14	sw.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	110	62	56.2	+1.6	79	15	30	25	34	2.13	-1.46	0.73	0	8	20	6	5	sw.	N. J. Experiment Station.
Paterson.....	Passaic.....	80	44	57.1	+2.7	80	†15	33	25	35	2.90	-1.25	0.72	0	10	10	16	5	s.	Heber A. Probert.
Plainfield.....	Union.....	100	29	55.6	+2.6	78	15	29	25	34	2.56	-1.09	0.88	0	11	14	9	8	sw.	John Neagle.
Pompton Plains.....	Morris.....	195	13	.....	.....	.....	.....	.....	.....	.....	3.50	-0.26	0.87	0	8	.....	.....	.....	.....	M. S. Taylor
Somerville.....	Somerset.....	60	33	55.1	+1.7	81	15	27	25	43	1.99	-1.42	0.65	0	9	15	11	5	nw.	A. A. Macdonald.
South Orange.....	Essex.....	200	45	54.8	+1.9	76	15	33	†11	29	2.68	-1.13	1.23	0	9	18	6	7	nw.	Dr. W. J. Chandler.
New York, N. Y.....	Essex.....	365	45	56.7	+1.1	77	15	37	25	20	2.25	-1.46	0.88	0	11	12	7	12	nw.	U. S. Weather Bureau.
Means and extremes...		.....	.....	55.8	+2.1	84	15	27	25	43	2.82	-0.98	1.26	0	9	15	9	7	nw.	
The Southern Interior.																				
Bridgeton.....	Cumberland.....	30	34	58.9	+2.2	80	†13	31	†24	34	3.59	+0.06	1.02	0	8	18	2	11	w.	Henry A. Jorden.
Burlington.....	Burlington.....	12	29	57.6	.....	80	15	34	25	36	2.21	-1.24	0.70	0	9	23	2	6	nw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	23	57.8	+2.7	82	15	29	25	37	3.17	-0.34	0.71	0	9	20	4	7	nw.	George L. Wilson.
Haddonfield.....	Camden.....	75	28	56.8	+3.1	80	14	30	25	36	2.65	-0.49	0.53	0	11	13	11	7	sw.	Prof. Chas. F. Richardson.
Hammonton.....	Atlantic.....	103	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Hightstown.....	Mercer.....	140	23	57.2	+3.5	81	13	28	25	38	2.11	-2.12	.....	0	7	.....	.....	.....	.....	Leon Dunbar.
Inlaystown.....	Monmouth.....	185	27	56.4	+1.5	80	†13	27	25	38	2.65	-1.42	0.60	0	9	20	5	6	s.	H. E. Bullock.
Indian Mills.....	Burlington.....	76	26	56.4	+2.0	81	†15	27	25	40	3.93	+0.35	0.81	0	10	15	8	8	sw.	James M. Armstrong.
Lakewood.....	Ocean.....	54	12	54.2	.....	78	15	29	†11	36	3.01	.....	1.04	0	9	17	3	11	nw.	R. W. Holman.
Moorestown.....	Burlington.....	75	53	58.0	+3.8	80	13	30	25	36	2.37	-1.27	0.70	0	9	16	10	5	nw.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	8	.....	.....	.....	.....	.....	.....	.....	3.83	.....	1.17	0	9	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	17	.....	.....	.....	.....	.....	.....	.....	3.74	+0.12	1.00	0	9	19	6	6	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	44	56.6	+1.0	79	15	35	25	28	1.99	-1.42	0.57	0	9	12	10	9	nw.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	22	56.4	+1.6	80	15	30	24	37	5.18	+1.51	1.34	0	9	15	11	5	nw.	Frank R. Austin.
Vineland†.....	Cumberland.....	87	47	57.9	+2.5	81	15	29	25	35	2.72	-0.74	0.86	0	9	.....	.....	.....	s.	E. V. C. Hendrickes.
Woodbine.....	Cape May.....	43	24	58.4	+2.8	78	15	31	24	33	3.57	-0.02	1.20	0	8	21	1	9	sw.	Baron de Hirsch Agr. Sch.
Philadelphia, Pa.....	.....	117	45	59.4	+3.1	79	†15	40	25	25	1.98	-1.12	0.64	0	9	14	9	8	nw.	U. S. Weather Bureau.
Means and extremes...		.....	.....	57.1	+2.4	82	15	27	25	40	3.11	-0.54	1.34	0	9	17	6	8	nw.	
The Sea Coast.																				
Asbury Park.....	Monmouth.....	22	26	55.6	0.0	74	21	33	24	23	1.95	-1.83	0.66	0	10	17	6	8	nw.	Wilbur H. Pancoast.
Atlantic City.....	Atlantic.....	16	42	58.0	+0.6	73	27	35	24	25	4.17	+0.87	1.11	0	11	14	6	11	nw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	31	59.4	-0.2	76	15	40	24	23	3.64	+0.34	1.00	0	8	15	7	9	nw.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	8	56.2	.....	80	21	33	24	27	2.85	.....	0.76	0	11	13	7	11	s.	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	17	57.8	+1.1	77	15	41	24	20	3.33	-0.27	1.30	0	11	14	10	7	nw.	U. S. Weather Bureau.
Means and extremes...		.....	.....	57.4	+0.4	80	21	33	24	27	3.19	-0.22	1.30	0	10	15	7	9	nw.	
For the State.....		.....	.....	56.2	+2.1	84	15	23	25	43	3.03	-0.70	1.34	0	9	17	7	7	nw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

* Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Vineland is South Vineland.

Daily precipitation for October, 1915.

Stations.	Day of month.																															Total.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
<i>The Highlands and Kittatinny Valley.</i>																																
Belvidere.....	.40	.30			.21		*	*						*	.70					1.00							.43					3.04
Charlotteburg.....	*	1.18			.26		*	.73						*	.21					.62							.22			T.		3.22
Culvers Lake.....	.50	.57	.02		.28		.01	.69						T.	.05					.98							.17		T.	T.		3.27
Dover.....	*	1.25			.30		*	.64						*	.20					.75						*	.43					3.57
Layton.....	.25	.53	.04		.38			.28						.02	.04	.02			T.	1.21							.20			.01		2.98
Newton.....																																
Phillipsburg.....	.19	.41			.36		.07	.41						.19	.02					1.20	.01						.63			T.		3.49
Sussex.....	.15	.55			.16			.54						.14						.68							\$					\$
<i>The Red Sandstone Plain.</i>																																
Bayonne.....	.76	.20			.17		.28	.42						.09	.02					.03	.01						.36					2.34
Bergen Point.....	.80	.31			.50		.28	.42						T.	.82					T.	.20						.74					4.07
Boonton.....		.91	.01		T.	.19		.64							.26	T.				.44	.11						.70			T.		3.26
Chatham H.....		1.03	.06		.02	.35		.68							.65					.23	.40						.18					3.60
Elizabeth.....	.44	.70			.23			.75						*	.22					.02							.36			T.		2.72
Flemington.....	.24	.29			.27		.17	.29						.43	.03	.02				.43							.18			T.		2.35
Highwood.....	.44	.92	.01		.20		.42	.47						.20	.04					.12	.16						.27			T.		3.25
Jersey City**.....	.83	.26			.20		.52	.26						.18						.05						.04	.21			T.		2.55
Lambertville.....	.24	.28			.31		.04	.47						.23	.04					.21							.11					1.89
Little Falls**.....	.85	.40	T.		.10		.45	.20						.55						.35	.03					.40						3.33
Newark**.....	.88	.21			.44		.30	.35						.56						.03							.08	.02		T.		2.87
New Brunswick.....	.29	.30			.20		.02	.73						.14						.08							.37					2.13
Paterson.....	.30	.72			.10		.11	.51						.26	.20					.35							.33			.02		2.90
Plainfield**.....	.70	.18			.35		.40	.20						.16	.13					.10	.01						.25	.08				2.56
Pompton Plains H.....		.84	.03		T.	.54		.63							.37					.48	.13						.48					3.50
Somerville.....	.27	.24			.24		.27	.38						.19	T.					.22							.18			T.		1.99
South Orange.....	.88	.35			.32		.28	.28						.37	.03					.11							.06					2.68
New York, N. Y.***.....	.73	.16			.15	T.	.50	.13						.14	.02					.01	.06					.03	.32			T.		2.25
<i>The Southern Interior.</i>																																
Bridgeton.....	1.02				.45	.28	.70							.50		T.				.06							.58					3.59
Burlington.....	.37	.33			.28	T.	.08	.55						.07	.04	.26				.02							.21					2.21
Clayton.....	.71	.18			.39	.09	.28	.36						.42	.05					.42							.69					3.17
Haddonfield.....	.53	.28	.02		.26	.01	.24	.39						.20	.31	T.				.01							.40					2.65
Hammonton.....																																
Hightstown.....	*	.61			.30	T.	.20	.52						.15													.33					2.11
Imlaystown.....	.35	.20			.30	.10	.50	.60						.10	.20												.30					2.65
Indian Mills.....	.58	.32			.38	.11	.12	.63						.14	.04	.81				T.							.80					3.93
Lakewood.....	.39	.65			.87	.05	.10	.50						T.	.22					T.							.23					3.01
Moorestown.....	.44	.26			.28		T.	.65						T.	.14	.20											.40					2.37
Northfield.....	.91	.23			1.17	.26	.31	.62							.17	T.					.06						.10					3.83
Pleasantville.....	.97	.15			1.00	.29	.59	.29						T.	.14					T.	.08						.23					3.74
Trenton***.....	.45	.09			.28	.01	.46	.11						.15	T.					T.						.42	.02		T.			1.99
Thickerton.....	.79	.95			.91	.14	.16	.70						1.34	.12												.07					5.18
Vineland.....	.77				.86	.11	.20							.03	.12					.01	.20						.42					2.72
Woodbine.....	.97	.20			1.20	.28	.20	.68						T.						.01	.03											3.57
Philadelphia, Pa.***.....	.54	.10			.18	T.	.44	.13						.09	.22	T.				T.							.16	.12				1.98
<i>The Sea Coast.</i>																																
Asbury Park**.....	.17	.42			.13	.01	.40	.26						.06	.32					T.							.07	.11				1.95
Atlantic City***.....	.87	.05			.94	.23	.68	.25						.10	.87	T.			.01	T.	.03						.14					4.17
Cape May City***.....	.97				.41	.32	.70	.21						.20	.80					T.	.03							T.				3.64
Long Branch**.....	.55	.76			.55	.01	.33	.31						.06	.09				.01	T.	.03						.08	.10				2.85
Sandy Hook***.....	.49	.30			.15	.01	.30	.51						.65	.65					.01							.12	.14				3.33

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24 hour period, midnight to midnight.

|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.

* Precipitation included in the next following measurement. ** Precipitation for 24 hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.			Moisture.		Sun. shine.	
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity. per cent. at 8 a. m.	Relative humidity. per cent. at 8 p. m	Percentage of possible sunshine.
							Miles per hour.	Direction.	Date.			
Atlantic City.....	30.13	30.47	11	29.61	2	7	31	e.	1	81	77	67
Asbury Park.....		30.47	11	29.71	1	8	36	e.	1			
Cape May.....		30.45	10	29.72	28							65
Jersey City.....	30.10	30.44	11	29.68	29	13	63	nw.	30	*79	64	68
Long Branch.....	30.12	30.37	11	29.80	30		50	n.	30	*73	*65	55
Newark.....	30.09	30.44	11	29.70	29	15	65	nw.	30		68	65
New York, N. Y.....	30.10	30.47	11	29.71	2	9	36	nw.	30		71	60
Philadelphia, Pa.....	30.12	30.45	11	29.70	29	14	49	nw.	30	82	77	60
Sandy Hook.....	30.10	30.45	11	29.70	29	14	49	nw.	30	82	77	60
Trenton.....	30.10	30.45	11	29.73	2	10	39	nw.	39	84	71	59

§ Two directions and dates.

* 7 a. m. † 9 p. m.

Daily temperature for October, 1915.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
<i>The Highlands and Kittatinny Valley.</i>																																	
Belvidere.....	Maximum... 60	55	68	72	69	61	65	64	59	61	65	..	..	75	82	70	75	73	71	66	..	68	63	57	60	71	70	63	66	68	64	*66.5	
	Minimum... 48	47	42	46	51	51	39	..	34	36	29	35	40	57	60	54	47	41	56	63	58	42	41	32	27	38	53	32	38	35	39	*43.7	
Charlotteburg.....	Maximum... 51	57	67	66	64	58	66	63	55	61	60	73	72	72	62	69	74	72	68	65	75	71	57	50	56	67	65	64	65	60	55	*63.9	
	Minimum... 40	46	45	32	57	47	32	49	33	36	24	32	35	57	62	52	43	33	44	57	54	43	37	34	23	32	43	27	31	46	40	40.8	
Dover.....	Maximum... 52	45	60	63	66	58	65	57	58	63	73	73	72	77	62	62	72	66	69	63	77	64	48	47	56	67	66	62	64	54	61	62.5	
	Minimum... 44	45	42	36	56	41	36	45	33	36	28	38	39	60	60	58	46	38	51	59	55	40	36	33	26	35	43	31	34	43	38	42.0	
Layton.....	Maximum... 53	51	60	70	71	67	60	69	56	58	62	70	79	73	80	67	76	71	66	63	79	69	55	53	57	67	68	62	65	62	65	65.3	
	Minimum... 42	46	46	45	52	48	35	51	31	38	27	32	36	51	59	53	45	38	50	57	55	35	37	33	24	32	47	29	34	43	33	41.4	
Newton.....	Maximum... ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
	Minimum... ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Phillipsburg.....	Maximum... 55	54	69	73	69	65	62	67	56	59	64	74	76	72	82	72	73	70	71	66	77	70	59	54	58	70	66	61	67	64	62	66.4	
	Minimum... 48	48	48	42	59	52	39	53	37	40	31	39	42	66	63	54	50	43	56	60	59	44	42	35	29	40	52	35	41	51	39	46.2	
Sussex.....	Maximum... 58	50	62	70	68	60	61	68	56	56	62	71	75	72	81	65	73	70	68	65	78	69	53	51	58	67	68	62	67	59	63	64.7	
	Minimum... 44	45	46	36	56	46	38	50	34	38	27	38	42	56	58	53	43	39	52	58	57	38	37	32	28	36	45	31	39	47	37	42.8	
<i>The Red Sandstone Plain.</i>																																	
Bayonne.....	Maximum... 56	55	62	65	69	66	60	66	60	61	63	71	74	74	80	67	70	69	74	68	77	67	54	55	55	69	69	62	69	62	60	65.5	
	Minimum... 50	51	50	45	58	50	45	51	41	42	36	44	47	58	63	56	52	47	52	60	59	48	42	36	35	43	54	40	44	48	43	48.0	
Bergen Point.....	Maximum... 57	55	63	65	69	66	61	61	60	59	63	73	75	79	80	65	72	73	75	65	78	68	54	54	57	69	70	62	71	60	63	65.9	
	Minimum... 48	50	48	44	57	50	41	55	37	37	34	41	46	56	64	56	49	45	49	59	58	45	41	32	34	46	50	37	40	44	42	46.3	
Boonton.....	Maximum... 59	53	63	61	68	68	62	63	62	59	..	..	..	71	72	72	..	68	69	65	74	74	64	57	54	68	69	62	63	61	57	64.4	
	Minimum... 43	48	48	36	53	52	37	50	37	42	28	35	39	54	62	55	41	38	47	50	52	37	39	35	28	34	47	30	34	48	43	42.6	
Elizabeth.....	Maximum... 60	50	66	70	69	63	60	70	64	65	66	76	79	79	84	69	76	74	77	69	80	72	55	60	62	75	72	67	72	63	64	69.0	
	Minimum... 48	50	49	40	56	53	41	52	38	37	31	38	42	55	64	55	46	42	52	58	59	42	40	30	28	37	56	35	36	43	41	45.0	
Flemington.....	Maximum... 63	55	68	73	69	67	60	70	59	59	64	73	75	79	80	72	74	73	68	80	70	55	53	60	71	70	65	69	65	64	67.7		
	Minimum... 49	51	49	41	58	54	40	53	40	40	31	35	41	56	64	56	53	43	53	59	57	43	41	34	30	36	55	34	37	48	38	45.8	
Highwood.....	Maximum... 55	53	59	64	67	65	58	62	56	57	60	69	73	75	75	63	69	69	71	66	76	65	49	54	55	66	68	60	65	57	60	63.3	
	Minimum... 46	50	46	38	56	49	40	50	35	35	30	42	41	54	62	53	45	40	51	59	60	40	39	29	27	34	50	31	37	42	36	43.5	
Jersey City.....	Maximum... 58	56	64	67	68	60	59	65	61	60	61	71	74	75	78	69	71	70	71	68	77	67	56	54	55	66	70	62	67	61	60	65.2	
	Minimum... 52	52	50	47	57	55	49	52	42	41	38	48	52	60	60	57	50	50	56	60	50	44	38	36	51	54	42	49	48	42	49	47.7	
Lambertville.....	Maximum... 67	57	65	71	71	67	60	66	63	57	63	78	74	76	77	74	71	72	72	72	72	65	54	57	69	68	65	69	67	59	67	59	67.3
	Minimum... 51	52	48	45	59	56	44	54	41	41	35	41	46	58	65	60	58	46	56	63	61	46	45	37	34	43	54	39	42	48	42	48.7	
Little Falls.....	Maximum... 56	55	62	64	71	70	65	65	59	60	61	68	73	78	78	70	70	69	72	67	71	64	53	55	56	68	67	60	65	57	61	64.8	
	Minimum... 44	45	41	38	55	43	39	42	36	35	30	38	42	54	59	48	44	41	50	57	54	42	36	34	30	35	40	34	38	44	40	42.2	
Newark.....	Maximum... 56	53	62	64	68	60	65	58	57	62	71	72	75	80	63	74	70	71	66	76	65	52	53	57	70	70	62	67	56	59	64	63.3	
	Minimum... 51	49	49	45	60	51	46	49	43	43	37	43	48	58	62	55	51	51	56	60	59	50	40	37	35	46	48	42	44	47	43	48.3	
New Brunswick.....	Maximum... 66	54	64	66	69	59	65	61	57	62	71	76	77	79	71	71	73	69	77	71	61	54	57	72	68	60	69	64	60	69	64	60	66.2
	Minimum... 49	50	50	42	54	55	41	51	37	38	32	40	43	57	64	56	43	54	61	59	45	47	32	30	38	56	35	39	48	48	48	46.3	
Paterson.....	Maximum... 58	55	63	68	69	66	60	67	60	62	67	75	76	77	80	68	76	74	67	80	69	59	58	60	69	72	64	68	62	63	67	63.3	
	Minimum... 49	50	49	43	56	54	44	50	40	40	35	40	45	57	64	56	49	45	54	61	59	45	43	36	33	38	51	39	40	47	42	46.9	
Plainfield.....	Maximum... 50	54	64	65	69	67	60	65	60	59	61	71	75	76	78	65	72	71	74	68	77	67	52	57	57	72	69	62	63	61	62	65.6	
	Minimum... 49	51	50	42	56	49	42	52	35	39	32	38	42	56	65	56	50	43	54	59	59	41	41	30	29	38	54	35	38	44	41	45.5	
Somerville.....	Maximum... 61	56	66	69	69	67	60	67	59	59	63	72	77	78	81	72	73	74	74	67	79	69	57	54	59	71	69	63	69	59	61	66.9	
	Minimum... 45	49	49	38	55	58	38	51	34	36	28	29	37	56	63	55	47	38	51	58	57	38	37	29	27	34	55	33	34	45	37	43.3	
South Orange.....	Maximum... 55	54	60	62	68	59	58	64	63	57	60	67	71	74	76	64	69	68	70	67	74	63	47	52	54	69	66	67	64	57	57	63.1	
	Minimum... 50	50	46	43	57	49	44	50	42	42	33	41	46	58	64	53	49	47	55	59	44	39	33	35	40	50	39	40	45	41	46.5		
New York,																																	



Scale of Shades.

- 0 to 2 inches.
- 2 to 4 inches.
- 4 to 6 inches.
- 6 to 8 inches.
- Over 8 inches.

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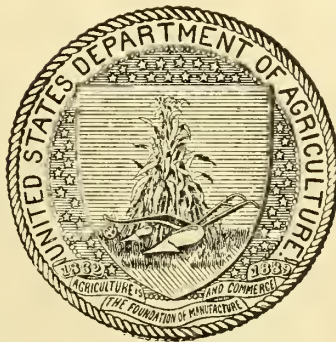
U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU
CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

NOVEMBER, 1915.

BY
G. HAROLD NOYES
SECTION DIRECTOR



TRENTON, N. J.
WEATHER BUREAU OFFICE
DECEMBER 22, 1915.

Departure of the Mean Temperature from the Normal, November, 1915.



Shaded portions show excess (+).
 Unshaded portions show deficiency (-).
 Lines show amount of excess or deficiency.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Section Director.

VOL. XXVIII. TRENTON, N. J., NOVEMBER, 1915. No. 11.

GENERAL SUMMARY.

The location of New Jersey is such that in November indications of the near approach of winter often appear, in the form, particularly, of cyclonic storms of more than ordinary severity. This fact was amply borne out by conditions that prevailed during this month in 1915. The storms that overspread the State on the 2d, 15th, and 19th, were attended by notable gales, but no great amount of rain, nor were they followed by cold waves as often happens. Throughout the greater portion of the month, the weather was exceptionally fine. It was warmer than normal, with extremes of temperature well within the record, and there was more clear sky and sunshine than ordinarily prevails in November, and correspondingly less cloudiness and rain. The warm weather at the close of October continued the first two days of November and was followed by nearly a week of temperature slightly below normal. But it was generally warmer than normal during the remainder of the month, except on the 16th, 17th, 18th, 22nd, 23d, and 30th. The lowest temperatures occurred on the 18th, 23d, and toward midnight at the close of the last day of the month. While there were about as many rainy days as usual, the quantity of rain was deficient, and snow amounted to no more than trace on the 22nd, and 23d. Winter grain and pastures continued in good condition throughout the month, and the open weather was generally favorable for out of doors pursuits.

The mean stage of the Delaware River at Phillipsburg was 1.8 feet, the highest being 4.5 feet on the 21st. At Trenton the mean stage was 1.3 feet, which was normal; the highest was 1.8 feet on the 22nd and 23d.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 39 stations, was 44.0°, which was 1.1° above normal. The northern highlands was about 5° colder than the coast and extreme southern counties. The highest temperature, 75°, occurred at Indian Mills on the 1st, and the lowest, 16°, at Culvers Lake on the 18th. The lowest mean temperature was 40.4° at Sussex, and the highest, 48.0°, at Cape May City. The greatest daily range of temperature was 41° at Indian Mills on the 8th. Departures from normal mean temperature of the various stations ranged from a fraction of a degree below to about two degrees above. The lower temperatures of the northern regions reached well to the southward in the interior, between the coast and the Delaware River.

PRECIPITATION.

The average rainfall of the State, as deduced from observations of 42 stations, was 1.69 inches, which was 1.75 inches below normal. The deficiency varied from less than half an

inch to more than two and a half inches. The lack of rain in Mercer County in October continued into November, Trenton reporting the least monthly amount, 0.96 inch, while the greatest was 3.11 inches at Bergen Point. Culvers Lake was the only station which reported as much as 0.1 inch of snow, which occurred on the 24th. The greatest amount of rain in 24 consecutive hours was 1.65 inches at Charlotteburg on the 18th-19th. The average number of days throughout the State, on which 0.01 inch or more precipitation occurred was 8, which was normal.

WIND.

The prevailing wind direction for the month was from the northwest, with an approximate velocity of 14 miles per hour. The highest velocity for five consecutive minutes was 75 miles per hour from the east on the 19th at Long Branch. Gales were also reported on the 2d and 15th.

SUNSHINE AND CLOUDINESS.

The average number of clear days throughout the State was 14; partly cloudy, 8; cloudy, 8; which was 2 more clear and 1 less partly cloudy and cloudy, each, than normal. The average percentage of possible sunshine was about 60, which was approximately normal.

MISCELLANEOUS.

Atmospheric pressure, reduced to sea level, was 30.05 inches, which was 0.05 inch below normal. Highest readings occurred on the 18th, and lowest on the 19th. Fog was especially noticeable on the 24th, 25th, 26th, 27th, and 29th, and in some localities on the 5th, 12th, 13th, and 14th. It was so dense on the 26th as to cause accidents in traffic. Solar halos were observed on the 4th and 18th at several stations, and lunar halos on the 13th, 18th, 19th, and 20th. At Indian Mills on the 5th, the aurora was observed.

COMPARATIVE DATA FOR NOVEMBER.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Cloudy.	Partly cloudy.	of inch or more prec.
1885.....	44.8	76	18	4.53	7.90	2.72	.....	.....	.....	.....
1886.....	44.5	73	17	4.49	6.24	3.45	.....	.....	.....	.....
1887.....	41.5	72	13	1.94	2.60	0.95	.....	.....	.....	6
1888.....	45.8	77	8	3.97	5.41	2.66	.....	.....	13	10
1889.....	45.7	69	13	8.48	11.45	4.70	.....	.....	13	13
1890.....	43.8	74	11	0.82	1.10	0.38	13	12	5	8
1891.....	42.2	70	6	2.39	3.47	1.54	12	10	8	4
1892.....	41.9	71	12	7.29	9.49	4.74	8	9	13	11
1893.....	41.8	70	11	3.48	4.53	2.19	10	11	9	7
1894.....	40.3	76	11	3.34	5.12	1.77	13	7	10	10
1895.....	45.7	80	12	3.17	5.10	1.56	12	7	11	10
1896.....	48.2	78	12	3.05	5.68	1.37	9	9	12	8
1897.....	43.8	74	10	4.59	5.95	2.42	8	11	11	12
1898.....	42.4	70	11	6.76	9.07	3.83	10	9	11	14
1899.....	44.0	71	17	2.29	4.32	0.72	15	8	8	7
1900.....	47.5	79	15	3.43	5.54	1.82	9	10	11	9
1901.....	38.5	69	10	2.38	4.23	1.18	12	9	9	6
1902.....	49.3	80	20	2.20	4.17	0.87	10	11	9	8
1903.....	39.9	79	3	1.26	2.03	0.75	16	8	6	6
1904.....	40.2	69	6	2.18	3.40	1.30	12	10	8	6
1905.....	42.1	70	6	1.84	2.86	0.54	12	10	8	6
1906.....	43.6	70	8	1.61	2.52	1.06	16	7	7	6
1907.....	43.5	68	13	5.65	6.95	4.19	10	8	12	13
1908.....	43.1	72	2	0.96	1.29	0.35	14	8	8	4
1909.....	46.4	80	17	2.36	4.33	1.32	13	8	9	8
1910.....	40.4	71	12	3.79	5.73	1.63	5	13	12	9
1911.....	41.3	73	13	5.17	6.50	3.17	8	11	11	10
1912.....	45.3	76	11	3.43	8.12	2.02	15	8	7	6
1913.....	46.2	77	19	2.71	4.89	1.00	14	7	9	7
1914.....	43.3	80	6	2.60	4.81	1.21	16	8	6	6
1915.....	44.0	75	16	1.69	3.11	0.96	14	8	8	8

Climatological data for November, 1915.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation of in. or more.	Clear.	Pt. cloudy.			Cloudy.
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	24	42.6	+1.4	68	†1	20	18	35	2.56	-0.93	1.30	0	9	17	4	9	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	23	41.4	+0.9	67	1	18	25	37	2.83	-0.90	1.65	T.	8	19	6	5	nw.	George S. Briggs.
Culvers Lake†.....	Sussex.....	848	14	.....	.....	.....	.....	16	18	.....	1.69	-1.13	0.67	0.1	10	18	3	9	w.	Brice E. Riker.
Dover.....	Morris.....	600	31	40.8	+0.5	68	1	22	†23	32	2.52	-1.11	1.35	T.	8	4	18	8	.....	William C. Harris.
Layton.....	Sussex.....	480	15	40.7	+2.3	67	1	18	18	40	2.13	-0.95	0.74	T.	12	11	6	13	sw.	A. M. Depue.
Newton.....	Sussex.....	678	35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	D. Wilson Smith.
Phillipsburg.....	Warren.....	363	33	43.0	+1.4	70	1	24	18	30	2.09	-1.19	1.04	0	8	15	7	8	w.	George Dymock.
Sussex.....	Sussex.....	442	25	40.4	-0.1	65	†1	19	18	35	.....	.....	.....	0	.....	.....	.....	.....	.....	.....
Means and extremes...	.....	.....	.....	41.5	+1.1	70	1	16	18	40	2.30	-1.04	1.65	T.	9	14	7	9	w.	.....
<i>The Red Sandstone Plain.</i>																				
Bayonne.....	Hudson.....	50	25	44.8	+1.8	69	1	27	23	23	1.39	-2.14	0.54	T.	7	13	7	10	nw.	Erskine R. Eadie.
Bergen Point†.....	Hudson.....	37	18	44.4	+1.4	69	1	25	23	27	3.11	-0.47	0.91	T.	5	6	17	7	nw.	William H. Mitchell.
Boonton.....	Morris.....	400	25	42.4	.....	68	1	18	18	35	1.80	-1.87	0.88	T.	7	20	4	6	sw.	J. W. Demmers.
Chatham.....	Morris.....	234	13	.....	.....	.....	.....	.....	.....	.....	1.95	-1.54	0.67	0	8	17	1	12	w.	Miss M. A. Butler.
Elizabeth.....	Union.....	45	36	44.0	+0.4	71	1	22	†18	34	1.70	-1.64	0.59	0	8	8	13	9	nw.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	27	43.7	+0.9	73	1	23	23	35	2.03	-1.32	0.72	0	10	15	5	10	w.	Hiram E. Deats.
Highwood.....	Bergen.....	90	26	41.8	-0.5	69	1	19	18	33	1.93	-1.70	0.95	T.	7	10	12	8	nw.	Charles J. Bates.
Jersey City.....	Hudson.....	10	16	45.5	+1.9	70	1	29	†18	23	1.60	-1.80	0.62	T.	7	11	11	8	nw.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	28	45.1	+2.1	71	1	27	†18	26	2.19	-1.42	0.84	0	8	14	13	3	nw.	Samuel W. Cochran.
Little Falls.....	Passaic.....	180	12	42.0	.....	69	1	22	18	28	2.03	-1.49	0.95	0	8	19	1	10	w.	Montclair Water Co.
Newark.....	Essex.....	159	73	44.6	+1.7	70	1	29	†18	25	1.48	-2.02	0.49	0	8	11	5	14	nw.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	110	62	43.4	-0.2	70	1	22	23	30	1.61	-1.98	0.68	0	8	22	5	3	nw.	N. J. Experiment Station.
Paterson.....	Passaic.....	80	44	45.1	+1.8	71	1	26	18	28	1.85	-1.41	0.70	T.	9	7	17	6	nw.	Heber A. Probert.
Plainfield.....	Union.....	100	29	43.6	+1.6	72	1	21	23	32	1.67	-1.92	0.64	T.	10	10	15	5	nw.	John Neagle.
Pompton Plains.....	Morris.....	195	13	.....	.....	.....	.....	.....	.....	.....	2.34	-1.15	1.14	0	8	16	2	12	sw.	M. S. Taylor.
Somerville.....	Somerset.....	60	33	42.2	0.0	72	1	17	23	35	1.47	-1.92	0.62	0	7	13	11	6	nw.	A. A. Maedonald.
South Orange.....	Essex.....	200	45	43.8	+2.2	68	1	27	†18	25	1.78	-1.59	0.76	T.	7	16	5	9	nw.	Dr. W. J. Chandler.
New York, N. Y.....	.....	365	45	45.4	+1.4	68	1	30	23	21	1.09	-2.35	0.50	T.	8	7	9	14	nw.	U. S. Weather Bureau.
Means and extremes...	.....	.....	.....	43.8	+1.2	73	1	17	23	35	1.88	-1.61	1.14	0	8	13	9	8	nw.	.....
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	34	46.0	+1.1	70	†1	22	23	35	1.15	-2.11	0.60	0	3	22	6	2	w.	Henry A. Jorden.
Burlington.....	Burlington.....	12	29	44.9	.....	72	1	24	23	32	1.18	-2.56	0.68	T.	6	23	3	4	nw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	23	45.1	+1.7	74	1	20	23	36	1.02	-2.51	0.57	0	9	18	8	4	.....	George L. Wilson.
Haddonfield.....	Camden.....	75	28	44.1	+1.5	72	1	22	23	36	1.47	-1.85	0.75	T.	10	13	13	4	nw.	Prof. Chas. F. Richardson.
Hammonton.....	Atlantic.....	103	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hightstown.....	Mercer.....	140	23	43.8	+0.2	72	1	21	†18	38	1.45	-2.21	0.70	T.	7	.....	.....	.....	nw.	Leon Dunbar.
Imlaystown.....	Monmouth.....	185	27	43.4	-0.9	72	1	18	23	39	1.57	-2.09	0.60	0	7	21	5	4	w.	H. E. Bullock.
Indian Mills.....	Burlington.....	76	26	44.1	+0.7	75	1	17	23	41	1.34	-2.26	0.43	0	8	16	7	7	nw.	James M. Armstrong.
Lakewood.....	Ocean.....	54	12	42.8	.....	71	1	18	†18	33	1.82	.....	0.73	T.	7	13	6	11	w.	R. W. Holman.
Moorestown.....	Burlington.....	75	53	45.0	+2.0	72	1	23	†18	34	1.37	-2.05	0.71	T.	7	13	14	3	nw.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	8	.....	.....	.....	.....	.....	.....	.....	1.46	.....	0.58	0	9	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	17	.....	.....	.....	.....	.....	.....	.....	1.52	-1.84	0.77	0	8	23	4	3	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	44	44.5	+0.1	69	1	27	30	26	0.96	-2.47	0.63	T.	7	10	9	11	w.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	22	44.8	+0.8	74	1	18	23	32	.....	.....	.....	0	.....	16	8	6	nw.	Frank R. Austin.
Vineland †.....	Cumberland.....	87	47	45.2	+1.3	74	1	22	†18	36	1.02	-2.28	0.32	0	8	13	2	15	nw.	E. V. C. Hendrickses.
Woodbine.....	Cape May.....	43	24	45.8	+1.8	72	2	21	18	32	1.25	-1.90	0.55	0	6	22	4	4	sw.	Baron de Hirsch Agr. Sch.
Philadelphia, Pa.....	.....	117	45	47.4	+2.5	70	2	32	30	26	1.22	-1.84	0.65	T.	9	12	10	8	nw.	U. S. Weather Bureau.
Means and extremes...	.....	.....	.....	44.6	+0.9	75	1	17	23	41	1.33	-2.18	0.77	0	7	17	7	6	nw.	.....
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	26	46.1	+1.9	73	1	25	23	26	1.02	-2.25	0.39	T.	8	16	11	3	w.	Wilbur H. Pancoast.
Atlantic City.....	Atlantic.....	16	42	46.6	+1.1	72	2	27	30	27	1.25	-1.98	0.56	0	9	11	9	10	nw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	31	48.0	+0.6	73	1	29	23	23	1.16	-2.06	0.60	0	8	12	11	7	nw.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	8	45.7	.....	74	1	26	†18	28	1.69	.....	0.68	T.	7	9	5	16	w.	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	17	46.0	+1.5	67	1	31	23	16	1.33	-2.43	0.55	0	8	13	6	11	w.	U. S. Weather Bureau.
Means and extremes...	.....	.....	.....	46.5	+1.3	74	1	25	23	28	1.29	-2.18	0.68	0	8	12	8	10	w.	.....
For the State.....	.....	.....	.....	44.0	+1.1	75	1	16	18	41	1.69	-1.75	1.65	0	8	14	8	8	nw.	.....

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

* Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Vineland is South Vineland.

Daily precipitation for November, 1915.

Stations.	Day of month.																															Total.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>The Highlands and Kittatinny Valley.</i>																																	
Alvordville				.09					*			.06			.55				1.30	.22	.04						.28	.02					2.56
Charlotteburg				*				.35							.40				1.65	.10		T.					.18		.15				2.83
Silvers Lake		.01		.04	.02			.12				.01	T.	T.	.59	T.			.62	.05	.01		T.	T.			.14		.08				1.63
Overton				.10				.16						*	.47				1.35		.03	T.	T.				.22		.19				2.52
Wayton		.10		.11	.02			.15	T.			T.	.05	*	.54	.01			.74	.14	.04	T.	T.				.12		.11				2.13
Swanton																																	
Phillipsburg				.13	.02			.11				T.	.02	.01	.63				.86	.18	T.							.13		T.			2.09
Issex		*		*	.29			.09							.58				\$	\$	.02							.14		.16			\$
<i>The Red Sandstone Plain.</i>																																	
Wyomere				.05				.16						.27	.27				.42			T.						.14		.08			1.39
Bergen Point				T.				.91		T.	T.			.25	.30				.80	T.	T.	T.						.85					3.11
Monton					.05			.20				T.		.44	.01				.19	.69	T.		T.	T.				.22	T.	T.			1.80
Matham H.					.07			.30						*	.22	.33			.12	.55								.20	.16				1.95
Elizabeth		T.		*	.05			.12				T.			.58				.59									.16		.20			1.70
Livingston				.08	.02			.18				T.	T.	.05	.67				.66		.06				.13			.18	T.	T.			2.03
Highwood				.05	T.			.26				T.		.14	.34				.95		T.	T.						.09		.10			1.93
Rey City**				.04				.17				T.		.40	.16				.62		T.	T.	T.	T.				.15	.06				1.60
Amberville				.12	.14			.12				T.		.10	.74				.81		.02							.14					2.19
Little Falls**				.06				.12	.14					.30	.17				.95									.17		.12			2.03
Dwark**				.04				.10	.05			T.		.24	.25				.34	T.	T.							.24		.22			1.48
New Brunswick				.07	.03			.10	.10					.08	.60				.44	T.								.15		.14			1.61
Storson		T.	T.	.05	T.			.32				T.	T.	.05	.45				.70		.02	T.		T.				.09		.17			1.85
Winfield**				.07				.10	.02			.02		.37	.27				.52		.02		T.					.18		.10			1.67
Hampton Plains H.				.09				.27							.44	.08			.31	.83								.20	.12				2.34
Sumerville				.04				.15				T.		.14	.48				.42									.22		.02			1.47
South Orange			T.	.04				.16				T.		.16	.40				.76		T.	T.						.17		.15			1.78
New York, N. Y.***		T.		.03				.07	.06			T.		.35	.15				.19		T.	T.	T.					.10		.14			1.09
<i>The Southern Interior.</i>																																	
Bridgeport				T.								T.		.30	.25				.60				T.					T.					1.15
Arlington				.10				.05				T.		.23	.45				.26				T.					.09					1.18
Wayton				.02	.01			.03						.40	.17				.33				.01					.02		.17			1.02
Addonfield				.09				.06				.01	.04	.46	.29				.45				T.	T.	.02			.04		.01			1.47
Hammononton																																	
Lightstown				.08				.13						.23	.47				.29				T.					.15		.10			1.45
Waystown				*				.15						.25	.35				.60									.10		.12			1.57
Adrian Mills				T.	.08			.06					.02	.24	.43				.42				T.					.05		.04			1.34
Skewood				.08				.09				T.		.17	.56				.64		T.							.13		.15			1.82
Coorestown				T.	.07			.07					.03	.14	.57				.35				T.	T.				.14					1.37
Northfield				.01				.03				T.	.01	.32	.16				.58				T.		.12			.02		.21			1.46
Leasantville				.01				.02				T.	.01	.33	.21				.77				T.					.01		.16			1.52
Trenton***				.07			.03	.02				T.		.43	.20				.11		T.		T.					.10		T.			0.96
Wickertown				.05				*				.07		.30	.33						T.					.03				.30			\$
Wineland				.03	.05				.02			.01		.30	.27				.32		T.							.02					1.02
Woodbine					.01							T.		.37	.18				.45									.07		.17			1.25
Philadelphia, Pa.***				.07				.01	.04			.02		.44	.21				.40				T.	.01				.02		T.			1.22
<i>The Sea Coast.</i>																																	
Asbury Park**		T.		.02				.14				.01		.17	.15				.39		T.		T.					.05		.09			1.02
Atlantic City***				T.	.01			.03				.03		.31	.13				.56		T.		T.		.02			.02		.14			1.25
Cape May***				T.				.07				.07		.32	.28				.03	.30		T.		.01				.01		.14			1.16
Long Branch**			T.	.06				.13						.39	.29				.51				T.					.16		.15			1.69
Andy Hook***				.03				.02	.09			T.		.41	.14				.54						T.			.01		.09			1.33

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24 hour period, midnight to midnight.

||| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.

* Precipitation included in the next following measurement. **Precipitation for 24 hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.				Moisture.		Sun. shine.
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	Percentage of possible sunshine.
							Miles per hour.	Direction.	Date.			
Atlantic City	30.08	30.51	18	29.27	19	8	34	se.	19	77	64	69
Asbury Park												
Cape May	30.09	30.52	18	29.42	19	10	37	se.	19			
Jersey City	30.04	30.48	18	29.23	19							61
Long Branch	30.05	30.46	18	29.23	19	18	75	e.	19	79	66	56
Newark							45	w.	19	*70	†62	
New York, N. Y.	30.03	30.48	18	29.21	19	19	71	se.	19	72	59	54
Philadelphia, Pa.	30.06	30.52	17	29.23	19	10	35	se.	19	75	60	58
Sandy Hook	30.03	30.50	18	29.19	19	18	60	se.	19	78	72	58
Trenton	30.04	30.50	18	29.20	19	12	54	se.	19	77	66	58

§ Two directions and dates.

* 7 a. m.

† 9 p. m.

Daily temperature for November, 1915.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.			
<i>The Highlands and Kittatinny Valley.</i>																																			
Belvidere.....	Maximum	68	66	51	49	54	49	59	58	68	58	59	56	58	59	49	48	46	54	66	57	49	45	39	42	49	54	50	55	47	41	...	53.1		
	Minimum	39	45	40	32	34	28	24	28	40	37	32	38	32	30	40	30	26	20	33	39	31	32	23	32	24	24	32	27	37	27	...	31.9		
Charlotteburg.....	Maximum	67	65	51	46	47	44	55	60	59	51	56	60	57	53	47	43	41	52	57	59	52	43	35	41	52	58	49	59	49	40	...	51.6		
	Minimum	42	49	38	33	35	29	26	28	37	35	28	37	34	26	43	30	30	22	27	36	31	31	19	28	18	21	28	32	38	27	...	31.3		
Dover.....	Maximum	68	65	48	46	49	47	56	58	61	53	55	59	57	46	47	41	39	47	61	44	52	38	34	42	50	56	46	52	47	38	...	50.1		
	Minimum	44	44	37	30	35	29	27	26	43	35	31	38	34	29	35	31	26	23	31	34	33	30	22	30	22	24	30	30	34	26	...	31.4		
Layton.....	Maximum	67	66	49	46	49	47	60	58	61	54	54	59	57	48	49	44	44	53	63	56	50	43	38	43	48	55	49	56	45	41	...	51.7		
	Minimum	39	44	39	29	32	32	20	23	38	34	24	36	29	24	38	31	24	18	29	38	33	30	20	30	21	24	27	26	35	24	...	29.7		
Newton.....	Maximum	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	...		
	Minimum	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...	...		
Phillipsburg.....	Maximum	70	67	52	47	51	47	56	59	62	56	58	56	57	52	47	41	46	51	66	57	50	46	37	44	45	56	49	54	47	41	...	52.2		
	Minimum	41	46	41	34	34	30	27	29	41	38	29	42	34	32	40	31	31	24	34	40	35	33	25	31	25	26	36	31	39	29	...	33.7		
Sussex.....	Maximum	65	65	48	..	..	..	55	60	60	51	51	55	55	..	..	43	43	46	64	58	48	41	38	43	49	57	50	57	47	41	...	49.5		
	Minimum	43	46	40	..	..	..	24	25	40	35	27	37	..	..	..	31	27	19	30	38	33	30	21	30	22	26	30	30	39	25	...	31.2		
<i>The Red Sandstone Plain.</i>																																			
Bayonne.....	Maximum	69	68	51	51	54	51	54	58	65	54	56	57	59	52	51	45	47	49	59	51	56	46	39	45	47	56	51	54	53	42	...	53.0		
	Minimum	47	50	42	36	41	37	31	36	43	39	36	45	40	36	39	32	28	40	39	37	33	27	33	30	31	35	35	39	31	...	36.7			
Bergen Point.....	Maximum	69	68	52	52	54	52	57	64	65	56	56	57	61	53	51	47	47	51	62	49	58	43	40	45	47	57	52	54	54	43	...	53.9		
	Minimum	46	49	34	32	38	37	30	38	41	36	36	42	37	33	37	36	29	26	35	36	35	30	25	36	30	29	35	32	38	28	...	35.0		
Boonton.....	Maximum	68	66	52	48	..	..	..	56	..	..	..	58	60	..	..	48	45	53	63	59	55	48	39	44	51	56	49	55	49	42	...	53.0		
	Minimum	40	39	42	27	33	30	26	26	39	38	..	37	31	..	..	45	45	50	52	63	61	55	46	39	46	52	60	51	54	44	...	55.0		
Elizabeth.....	Maximum	71	68	53	51	55	53	60	62	67	57	59	57	61	53	51	47	50	52	63	61	55	46	39	46	52	60	51	54	51	44	...	53.1		
	Minimum	39	49	38	29	37	31	27	28	42	34	31	40	33	30	45	30	27	22	33	40	39	30	22	32	26	26	32	32	40	29	...	54.3		
Flemington.....	Maximum	73	66	52	48	55	51	62	62	67	58	56	55	61	54	50	46	49	55	67	49	55	47	37	45	51	59	50	55	53	42	...	53.1		
	Minimum	41	50	41	32	33	33	27	28	40	37	29	40	33	34	32	44	31	29	55	67	49	55	47	37	45	51	59	50	53	41	...	52.0		
Highwood.....	Maximum	69	67	51	50	53	49	51	59	63	54	53	56	59	51	51	45	45	49	59	51	55	41	39	42	48	54	49	53	53	41	...	51.5		
	Minimum	43	46	40	29	33	32	25	26	42	35	27	39	32	28	39	30	26	49	61	49	56	42	40	45	46	53	52	52	53	43	...	52.7		
Jersey City.....	Maximum	70	68	51	50	54	50	55	56	65	54	55	58	59	53	52	45	45	49	61	49	56	44	44	46	46	54	53	55	51	46	...	54.0		
	Minimum	48	46	43	36	41	37	32	36	43	39	39	49	41	39	41	33	33	29	44	42	42	34	42	41	48	45	53	48	52	50	...	56.2		
Lambertville.....	Maximum	71	70	56	50	54	52	55	57	61	58	57	59	58	55	52	45	45	49	61	49	56	44	44	41	48	45	53	48	52	50	...	52.1		
	Minimum	45	54	43	34	37	36	30	32	43	39	32	43	37	35	45	33	33	27	40	42	39	34	27	34	27	34	27	34	30	...	52.0			
Little Falls.....	Maximum	69	67	56	51	53	50	54	57	60	53	55	57	58	52	52	44	46	48	60	47	54	42	41	48	45	53	48	52	50	...	52.1			
	Minimum	43	44	36	31	35	28	26	30	40	32	28	38	37	30	33	30	28	50	58	46	53	41	39	45	49	53	41	53	49	41	...	52.2		
Newark.....	Maximum	70	67	51	49	52	48	55	60	64	55	56	58	59	52	52	44	45	50	58	46	53	41	39	45	49	53	41	53	49	41	...	52.2		
	Minimum	45	47	41	35	40	36	32	36	44	40	39	48	40	41	36	32	32	29	38	37	37	32	29	34	32	33	38	40	36	...	53.2			
New Brunswick.....	Maximum	70	69	52	49	53	52	56	59	59	57	57	57	58	53	50	43	46	49	67	59	53	41	37	45	48	55	52	53	50	43	...	53.6		
	Minimum	43	52	38	30	36	34	28	30	42	34	32	42	36	34	42	31	30	25	37	40	26	31	22	32	27	26	34	34	33	28	...	54.5		
Paterson.....	Maximum	71	69	52	51	55	52	57	62	67	57	57	55	57	61	53	53	44	47	48	53	60	58	57	47	40	45	50	58	48	57	51	44	...	55.7
	Minimum	45	50	43	34	37	35	31	34	43	39	33	41	36	34	44	32	29	26	35	40	37	33	28	33	30	36	33	39	30	...	55.7			
Plainfield.....	Maximum	72	69	53	50	57	53	57	60	67	57	58	58	60	53	51	47	48	51	66	56	51	55	42	39	47	56	57	51	54	50	...	54.2		
	Minimum	40	47	41	29	37	33	28	29	42	37	30	42	34	31	38	30	28	52	66	33	33	33	30	21	34	26	26	35	30	39	28	...	53.0	
Somerville.....	Maximum	72	68	57	54	55	51	55	60	65	63	58	54	59	54	49	43	48	53	67	59	55	42	38	49	50	56	50	54	48	41	...	54.3		
	Minimum	40	47	41	29	37	33	28	29	42	37	30	42	34	31	38	30	28	52	66	33	33	33	30	21	34	26	26	35	30	39	28	...	53.0	
South Orange.....	Maximum	68	64	49	48	52	48	54	57	62	63	55	57	57	52	52	44	46	48	62	47	55	46	38	47	48	54	51	51	51	40	...	50.2		
	Minimum	44	47	36	31	40	35	32	37	44	38	35	43	36	36	37	32	31	27	37	34	34	31	27											



Scale of Shades.

- 0 to 2 inches.
- 2 to 4 inches.
- 4 to 6 inches.
- 6 to 8 inches.
- Over 8 inches

1.03
Stack
N Y J

U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU
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CLIMATOLOGICAL DATA

NEW JERSEY SECTION

DECEMBER, 1915.

BY

G. HAROLD NOYES

SECTION DIRECTOR



TRENTON, N. J.
WEATHER BUREAU OFFICE
JANUARY 20, 1916.

Departure of the Mean Temperature from the Normal, December, 1915.



Shaded portions show excess (+).
Unshaded portions show deficiency (-).
Lines show amount of excess or deficiency.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Section Director.

VOL. XXVIII. TRENTON, N. J., DECEMBER, 1915. No. 12.

GENERAL SUMMARY.

The location of New Jersey is such that in December winter of a pronounced type can prevail in the northern portions of the State, while to the southward, milder weather predominates. All portions of the State, lying approximately close to the ocean, feel the effects of storms passing along the coast, but those moving over the Lake region have less effect, owing to the high lands to the northwestward in adjoining States, which act as barriers. There were two storms that were attended by severe gales during December, 1915, in this State, the first on the 18th, and the second on the 26th. On the 26th, in central and northern portions, the wind ranged from 60 to 90 miles per hour, with barometer readings about 29.0 inches. Christmas Day was the warmest of the month, and in the northeast part of the State was followed by a thunderstorm.

A storm of rain and snow on the 13th, extending into the night, caused great damage to electric wire service, from central portions of the State northward, and in this region the snow remained on the ground for about ten days. The Delaware River was frozen from tidewater most of the way upstream from about the 14th to 19th, when the ice went out. Ponds and lakes in some instances were closed in at the close of the month, but most bodies of water in central and southern sections were open after the warm weather of Christmas.

While the month was slightly colder than average, the deficiency occurred during the first half, when it was below normal every day through the 16th, and thereafter was mostly warmer than usual. Even in the northern highlands the thermometer did not reach zero, as it usually does in December, and the highest recorded was well within the record.

The mean stage of the Delaware River at Phillipsburg was 3.3 feet, the highest being 8.0 feet on the 28th. At Trenton the mean stage was 2.3 feet, which was 0.1 foot below normal; the highest was 4.2 feet on the 20th and 21st.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 39 stations, was 31.9°, which was 1.2° below normal. The colder regions extended from the extreme north well into the "Pines", between the waters of the Atlantic and the Delaware valley. The highest temperature, 64°, occurred at Moorestown on the 26th, and the lowest, 3°, at Charlotteburg on the 22d. The lowest monthly mean temperature was 27.6° at Layton, and the highest, 35.6°, at Cape May. The greatest daily range of temperature was 37° at Indian Mills on the 23d. Departures below normal in temperature were practically universal throughout the State, and reasonably uniform.

PRECIPITATION.

The average precipitation of the State, as deduced from observations of 41 stations was 4.82 inches, which was 0.99 inch

above normal. The northern half of the State averaged over 5 inches, and the southern half less than 4. The depth of snow averaged 13.6 inches, ranging from 25.7 inches in the northern highlands to 7.9 inches along the coast. The precipitation was above normal in all but the two southernmost counties. The greatest monthly amount was 7.83 inches at Little Falls, and the least, 2.19 inches at Vineland. The greatest depth of snowfall was 35 inches at Sussex, and the least, 0.3 inch at Woodbine. The greatest amount of precipitation in 24 consecutive hours was 5.06 inches at Little Falls on the 13th. The average number of days throughout the State on which 0.01 inch or more precipitation fell was 8, which was 1 less than normal.

WIND.

The prevailing wind direction for the month was from the northwest, with an approximate velocity of 15 miles per hour. The highest velocity for five consecutive minutes was 76 miles per hour from the west and northwest at Sandy Hook and Long Branch on the 26th. The winds were also high on the 10th, 13th, 14th, and 18th.

SUNSHINE AND CLOUDINESS.

The average number of clear days throughout the State was 12; partly cloudy, 9; cloudy, 10; which was normal. The average percentage of possible sunshine was slightly below normal.

MISCELLANEOUS.

Atmospheric pressure, reduced to sea level, was 30.03 inches, which was 0.07 inch below normal. Highest readings occurred on the 31st, and lowest on the 18th and 26th. Fog was prevalent over most of the State on the 17th or 18th, or both, and over portions of the State on the 8th, 23d, and 25th. Solar halos were noted at some stations on the 11th and 27th, and lunar halos on the 11th, 16th, and 20th. Most stations in the northeast report a thunderstorm on the 26th, the electrical display being remarkable in some sections.

COMPARATIVE DATA FOR DECEMBER.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Cloudy.	Partly cloudy.	.01 inch or more prec.
1885.....	35.3	60	6	3.15	4.33	2.47	.....	.....	.....	.....
1886.....	29.1	60	-2	3.51	4.65	1.62	.....	.....	.....	.....
1887.....	33.7	62	6	5.29	7.32	3.64	.....	.....	12	10
1888.....	34.9	65	5	3.69	4.95	2.05	.....	.....	8	8
1889.....	41.5	71	8	1.62	3.69	0.25	.....	.....	9	9
1890.....	30.9	56	3	3.89	5.74	2.34	11	10	10	8
1891.....	40.9	71	9	4.25	5.32	2.25	13	9	9	8
1892.....	30.4	68	1	1.87	3.09	1.30	9	11	10	6
1893.....	34.9	70	5	3.39	4.66	1.67	11	10	10	11
1894.....	34.8	66	-3	4.36	6.39	1.64	12	9	10	9
1895.....	37.2	70	3	2.61	5.42	1.71	11	9	11	6
1896.....	31.3	64	-15	1.43	2.70	0.85	14	9	9	4
1897.....	35.1	69	-3	4.90	6.44	3.07	8	11	12	11
1898.....	33.3	66	-2	3.53	4.85	2.38	12	10	9	9
1899.....	35.5	69	-1	2.11	4.30	1.29	14	10	7	7
1900.....	34.4	64	-2	2.59	3.97	1.47	14	10	7	6
1901.....	32.6	68	-8	7.30	9.45	4.87	12	9	10	61
1902.....	31.7	62	-11	7.23	8.99	5.81	13	7	11	13
1903.....	28.6	56	-13	4.08	5.49	3.20	14	9	8	9
1904.....	27.0	60	-15	3.19	5.38	2.66	10	7	14	12
1905.....	36.3	61	5	3.65	5.60	2.58	14	8	9	7
1906.....	33.0	70	-5	3.99	6.18	2.70	9	8	14	13
1907.....	36.6	70	-3	4.91	7.13	3.55	12	8	11	9
1908.....	34.0	72	1	3.63	5.26	2.10	10	8	13	11
1909.....	29.8	60	-15	4.45	5.51	3.55	14	8	9	5
1910.....	26.5	58	-14	2.79	4.60	1.92	11	10	19	5
1911.....	38.4	70	2	3.77	5.09	2.94	10	7	14	11
1912.....	36.9	68	-1	4.73	6.33	3.40	13	9	10	9
1913.....	37.7	63	-11	3.03	4.59	1.47	13	9	9	7
1914.....	31.1	66	-12	5.33	9.12	2.99	10	6	25	12
1915.....	31.9	64	3	4.82	7.83	2.19	12	9	10	8

Climatological data for December, 1915.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation 0.1 in. or more.	Clear.	Pt. cloudy.			Cloudy.
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	24	30.8	0.0	56	25	13	12	31	5.06	+0.92	1.99	14.0	5	19	4	8		Samuel J. Hixson. George S. Briggs. Brice E. Riker. William C. Harris. A. M. Depue.
Charlotteburg.....	Passaic.....	719	23	28.3	-2.3	51	26	3	22	34	4.35	-0.04	2.15	32.0	6	13	14	4	.....	
Culvers Lake†.....	Sussex.....	848	14	.....	.....	.....	.....	4	31	.....	4.80	+1.27	1.80	28.6	11	15	5	11	nw.	
Dover.....	Morris.....	600	31	27.8	-2.3	50	18	9	22	31	7.14	+3.02	3.00	34.0	7	.....	.....	.....	.....	
Layton.....	Sussex.....	480	15	27.6	+0.2	52	26	4	22	31	5.53	+1.36	1.83	24.3	11	16	3	12	w.	
Newton.....	Sussex.....	678	35																	D. Wilson Smith. George Dymock.
Phillipsburg.....	Warren.....	363	33	30.8	-0.5	56	26	15	12	27	4.65	+0.97	1.78	12.3	9	14	6	11	nw.	
Sussex.....	Sussex.....	442	25	28.4	-1.4	53	26	7	22	30	6.08	+2.34	1.68	35.0	9	12	5	14	nw.	
Means and extremes.....				29.0	-1.0	56	25	3	22	34	5.37	+1.41	3.00	25.7	8	15	6	10	nw.	
<i>The Red Sandstone Plain.</i>																				
Bayonne.....	Hudson.....	50	25	32.6	-0.8	58	25	18	12	28	4.21	+0.69	1.75	8.0	9	17	5	9	nw.	Erskine R. Eadie. William H. Mitchell. J. W. Demmers. Miss M. A. Butler. L. B. Bonnett.
Bergen Point†.....	Hudson.....	37	18	32.4	-0.6	58	25	17	31	29	4.64	+0.65	1.80	9.0	8	12	11	11	nw.	
Boonton.....	Morris.....	400	25	29.4	.....	51	25	10	12	30	5.62	+1.52	2.54	13.4	7	14	6	11	nw.	
Chatham.....	Morris.....	234	13	.....	.....	.....	.....	.....	.....	.....	4.44	+0.63	1.65	16.0	9	17	4	10	nw.	
Elizabeth.....	Union.....	45	36	32.0	-1.5	56	25	15	12	30	4.89	+1.10	2.14	9.5	10	6	16	9	nw.	
Flemington.....	Hunterdon.....	140	27	31.6	-0.4	55	25	14	22	32	4.84	+1.16	1.60	17.8	9	15	5	11	nw.	Hiram E. Deats. Charles J. Bates. S. K. Pearson, Jr. Samuel W. Cochran. Montclair Water Co.
Highwood.....	Bergen.....	90	26	29.6	-2.8	53	26	10	12	26	5.71	+1.55	2.88	17.3	10	9	12	10	nw.	
Jersey City.....	Hudson.....	10	16	33.4	-0.6	54	18	19	31	24	4.87	+1.31	2.25	9.8	8	8	12	11	nw.	
Lambertville.....	Hunterdon.....	80	28	33.4	+0.1	54	25	18	12	25	3.72	-0.06	0.94	11.5	9	11	11	9	nw.	
Little Falls.....	Passaic.....	180	12	31.8	.....	55	25	15	12	21	7.83	+3.99	5.06	15.2	9	.....	.....	.....	w.	
Newark.....	Essex.....	159	73	31.8	-1.2	54	25	17	31	26	3.56	-0.24	1.00	11.4	9	8	9	14	nw.	Prof. William Wiener. N. J. Experiment Station. Heber A. Probert. John Neagle. M. S. Taylor
New Brunswick.....	Middlesex.....	110	62	31.3	-1.8	57	25	14	13	29	4.16	+0.41	1.10	10.7	9	22	5	4	w.	
Paterson.....	Passaic.....	80	44	32.2	-0.9	52	26	17	31	25	4.97	+0.86	1.85	20.5	9	5	17	9	sw.	
Plainfield.....	Union.....	100	29	31.8	-0.1	58	26	17	12	30	5.72	+1.83	2.92	13.8	9	13	8	10	nw.	
Pompton Plains.....	Morris.....	195	13	.....	.....	.....	.....	.....	.....	.....	6.44	+2.70	2.78	28.0	10	.....	.....	.....	.....	
Somerville.....	Somerset.....	60	33	30.2	-1.7	58	26	12	12	34	4.83	+1.26	1.76		9	8	11	12	nw.	A. A. Macdonald. Dr. W. J. Chandler. U. S. Weather Bureau.
South Orange.....	Essex.....	200	45	31.4	-0.6	57	18	18	12	23	6.74	+2.91	2.50	15.7	10	9	12	10	n.	
New York, N. Y.....		365	45	33.5	-0.9	55	18	17	31	26	4.23	+0.78	1.73	8.1	8	4	12	15	nw.	
Means and extremes.....				31.7	-1.0	58	25	10	12	34	5.13	+1.31	5.06	14.2	9	11	10	10	nw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	34	34.2	-1.4	58	25	20	15	29	3.41	-0.46	1.08	5.0	4				w.	Henry A. Jorden. D. B. McCoy. George L. Wilson. Prof. Chas. F. Richardson.
Burlington.....	Burlington.....	12	29	32.8	.....	60	25	17	15	30	4.95	+1.04	1.57	9.3	9	.....	.....	.....	nw.	
Clayton.....	Gloucester.....	126	23	33.2	-0.8	60	25	18	15	31	.....	.....	.....	7.5	15	8	8	8	nw.	
Haddonfield.....	Camden.....	75	28	32.8	-0.5	62	25	15	15	30	4.62	+0.97	1.12	19.1	8	9	14	8	nw.	
Hammononton.....	Atlantic.....	103	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Hightstown.....	Mercer.....	140	23	32.0	-1.6	60	25	16	12	34									nw.	Leon Dunbar. H. E. Bullock. James M. Armstrong. R. W. Holman. Geo. L. Gillingham.
Imlaytown.....	Monmouth.....	185	27	31.4	-3.2	57	18	12	15	35	5.36	+1.79	2.11	8.5	7	13	8	10	w.	
Indian Mills.....	Burlington.....	76	26	32.5	-1.5	62	25	14	27	37	4.65	+0.56	1.40	11.0	8	12	9	10	nw.	
Lakewood.....	Ocean.....	54	12	31.6	.....	58	18	14	27	35	5.62	.....	1.75	15.0	8	7	10	14	w.	
Moorestown.....	Burlington.....	75	53	33.3	0.0	64	26	17	12	34	4.90	+1.32	1.34	7.8	8	15	9	7	nw.	
Northfield.....	Atlantic.....	25	8								3.94		1.76	5.1	6					William L. Flick. Lincoln Van Gilder. U. S. Weather Bureau. Frank R. Austin. E. V. C. Hendricks.
Pleasantville.....	Atlantic.....	26	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Trenton.....	Mercer.....	190	44	32.4	-2.0	60	25	18	15	26	4.44	+1.28	2.10	9.5	9	6	12	13	nw.	
Tuckerton.....	Ocean.....	23	22	33.4	-1.1	53	18	16	27	31	5.46	+1.18	2.47	8.0	5	8	13	10	uw.	
Vineland†.....	Cumberland.....	87	47	33.3	-1.1	58	25	16	5	29	2.19	-1.65	0.83	2.9	7	10	5	16	w.	
Woodbine.....	Cape May.....	43	24	34.4	-0.6	57	18	17	15	26	3.69	-0.21	1.36	0.3	6	16	4	11	nw.	Baron de Hirsch Agr. Sch. U. S. Weather Bureau.
Philadelphia, Pa.....		117	45	35.0	-0.7	60	25	20	15	25	4.22	+1.18	1.08	6.0	9	12	9	10	nw.	
Means and extremes.....				32.9	-1.3	64	26	12	15	37	4.44	+0.58	2.47	8.4	7	11	9	11	nw.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	26	32.8	-1.7	57	18	18	15	21	3.51	-0.13	1.71	12.0	8	16	7	8	w.	Wilbur H. Pancoast. U. S. Weather Bureau. U. S. Weather Bureau. William D. Martin, Jr. U. S. Weather Bureau.
Atlantic City.....	Atlantic.....	16	42	34.8	-1.6	55	29	20	11	23	4.41	+0.67	1.76	6.8	9	11	6	14	nw.	
Cape May City.....	Cape May.....	17	31	35.6	-2.4	54	29	23	21	20	2.42	-1.36	1.14	1.3	9	9	13	9	nw.	
Long Branch.....	Monmouth.....	25	8	33.0	.....	57	18	19	15	27	4.88	.....	2.33	9.5	7	6	11	14	w.	
Sandy Hook.....	Monmouth.....	22	17	33.6	-1.0	55	18	20	15	23	4.31	+0.46	2.10	9.8	10	8	13	10	nw.	
Means and extremes.....				34.0	-1.7	57	18	18	15	27	3.91	-0.09	2.33	7.9	9	10	10	11	nw.	
For the State.....				31.9	-1.2	64	26	3	22	37	4.82	+0.99	5.06	13.6	8	12	9	10	nw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

* Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Vineland is South Vineland.

Daily precipitation for December, 1915.

Stations.	Day of month.																															Total.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>The Highlands and Kittatinny Valley.</i>																																	
Belvidere.....		T.						T.					1.18				.31	1.99								*			1.58			5.06	
Charlottesville.....							T.						*	2.15			*	0.56								.80			.84			4.35	
Culvers Lake.....		.02	T.	T.				.06	T.	T.			.72	.31	T.		.20	1.80							.01		.73		.04	.88	.03		4.80
Dover.....		.02						*					*	3.00				2.10								.90			1.12			7.14	
Layton.....		.03		T.				.09					1.01	.60			.33	1.83							.02		.76		.06	.78	.02		4.53
<i>The Red Sandstone Plain.</i>																																	
Bayonne.....		.01						.01					1.60	.15			.12	.93						T.		.65		T.	.72	.02		4.21	
Bergen Point.....		.18						T.	T.				1.80	.15			.19	.91								.55		.13	.70			4.64	
Boonton.....		T.	T.					T.	T.				0.14	2.40			T.	1.00	.81					T.		.45	.01		.23	.58		5.62	
Chatham H.....			.03					T.	.03				.20	1.65			T.	.62	.95							.28	T.		.30	.38		4.44	
Elizabeth.....		.04						.02					*	2.14			*	1.21					T.			.70		T.	.78			4.89	
Flemington.....		.03						.05					1.40	.20			.08	1.60						T.		.82		T.	.66			4.84	
Highwood.....		.02	.01				T.	.05					2.44	.44	T.		*	1.39								.63		.03	.70	T.		5.71	
Jersey City**.....		.02					T.	.01					1.80	.45	T.		.22	.87					T.		*	.76		T.	.74			4.87	
Lambertville.....		.05						.06					.94	.52			.27	.33								.73		.08	.74			3.72	
Little Falls**.....		.03						.03					5.06	.16			.29	.90								.53		.03	.80			7.83	
Newark**.....		.02						.02					.84	.50	T.		.28	.90							.01		.52		T.	.47			3.56
New Brunswick.....		.06					T.	.05	T.				1.10	.40			.16	1.09								.50		.03	.77			4.16	
Paterson.....		.02						.03	T.				1.38	.47	T.		.19	1.30		T.						.75		.02	.81			4.97	
Plainfield**.....		.05						.11	.02	T.			2.92	T.	T.		.28	1.15							T.	.55		.01	.63			5.72	
Pompton Plains††.....		T.	.04					.02	.08				.08	2.70			T.	.94	.95							.62	.12		.35	.54			6.44
Somerville.....		.03						.05					1.76	.24			.06	1.35								.56		T.	.64	.14		4.83	
South Orange.....		.05						.04					*	2.50	T.		*	3.00					T.			.60		.10	.25	.20		6.74	
New York, N. Y.***.....		.01	T.				T.	T.					1.60	.13	T.		.17	.89						T.		.01	.60		T.	.82			4.23
<i>The Southern Interior.</i>																																	
Bridgeton.....		T.					T.						.78				T.	.70								.85			1.08			3.41	
Burlington.....		.08		T.				.05					1.52	.05			.21	.87								.95		.02	1.20			4.95	
Clayton.....		.08						.01					.34				§	§								.36		.08	1.35			§	
Haddonfield.....		.07						.03	T.				1.09	.03			.21	.99							T.	1.08		T.	1.12			4.62	
Hammonton.....																																	
Highstown.....								.05					2.10	.01			.20	1.00								.60			1.30			5.36	
Inlaytown.....		.06						.04					.92	.38			.15	.68								1.02		T.	1.40			4.65	
Indian Mills.....		T.						.04	T.				1.75	.88			.10	.73								.98		T.	1.14			5.62	
Lakewood.....		.05						.04					1.34				.20	.99							T.	1.02		T.	1.26			4.90	
Moorestown.....																																	
Northfield.....		T.											1.76	.05			.05	.39								.31			1.38			3.94	
Pleasantville.....																																	
Trenton***.....		.05						.04	T.				2.10	T.			.26	.81						T.		.01	.59		.02	.56			4.44
Tuckerton.....								T.					1.80	.67			T.	.57								1.12		T.	1.30			5.46	
Vineland.....		.04		T.			T.	T.					.22	T.			.06	.44								.59		.01	.83			2.19	
Woodbine.....		.06						T.					1.36	T.			.05	.45								.60			1.17			3.69	
Philadelphia, Pa.***.....		.04					T.	T.	.05	T.			.80	T.			.27	.97							.33	.75		.01	1.00			4.22	
<i>The Sea Coast.</i>																																	
Asbury Park**.....		T.	T.				T.	T.	.03	T.	T.		1.69	.02			.19	.61								.05	.16		T.	.76			3.51
Atlantic City***.....		.01						.01	T.				1.75	.01			.04	.33								.07	.75		T.	1.44			4.41
Cape May City***.....		.02	.02				T.		.03	T.			.54	T.			.06	.19								.05	.38		.11	1.04			2.42
Long Branch**.....		.01	T.					T.					1.86	.47		T.	.10	.91								T.	.64		T.	.89			4.88
Sandy Hook***.....		.01						.01	.01				1.78	.32			.16	.55								.01	.61		T.	.85			4.31

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24 hour period, midnight to midnight.

†† Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.

* Precipitation included in the next following measurement. **Precipitation for 24 hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.				Moisture.		Sun. shine.
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	Percentage of possible sunshine.
							Miles per hour.	Direction.	Date.			
Atlantic City.....	30.06	30.58	31	29.24	18	9	33	nw.	26	80	70	61
Asbury Park.....												
Cape May.....	30.07	30.59	31	29.52	18	11	38	w.	26			
Jersey City.....	30.03	30.58	31	29.04	26							
Long Branch.....	30.03	30.55	31	29.01	26	19	76	nw.	26	76	69	51
Newark.....							60	nw.	26	*74	62	41
New York, N. Y.....	30.01	30.57	31	28.98	26	21	90	nw.	26	72	64	48
Philadelphia, Pa.....	30.04	30.58	31	29.26	18	11	42	nw.	18	72	67	49
Sandy Hook.....	30.01	30.57	31	28.98	26	20	76	w.	26	81	70	52
Trenton.....	30.02	30.55	31	29.20	18	13	64	w.	26	80	70	45

§ Two directions and dates.

* 7 a. m. † 9 p. m.

The Highlands and Kittatinny Valley.

^a, ^b, ^c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.

The Sea Coast.

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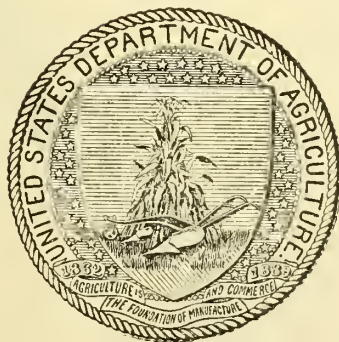
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CLIMATOLOGICAL DATA

NEW JERSEY SECTION

ANNUAL SUMMARY, 1915.

BY
G. HAROLD NOYES
SECTION DIRECTOR



TRENTON, N. J.
WEATHER BUREAU OFFICE
FEBRUARY 5, 1916.

ANNUAL MEAN ISOTHERMS AND PREVAILING WIND DIRECTION 1915.



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Section Director.
TRENTON, N. J.

OL. XX. ANNUAL SUMMARY, 1915. No. 13.

GENERAL SUMMARY.

A comparison of the two main climatic features, temperature and precipitation reduced to annual means, since the year 1885, reveals that variations of these factors are confined to relatively narrow limits, as would naturally be expected when considering the geologic and geographic position of New Jersey. The transition of general atmospheric characteristics is from west to east, and New Jersey is guarded by the Appalachian barriers from some of the extremes of continental development that approach from the west. The broken ranges of highlands in the north and northwest are more severely dealt with, climatically, than the southern portions of the State, more than half of which is comparatively recent coastal plain development, and where rather conditions are subject to modifications from continental and oceanic type.

In thirty years the State annual mean temperature has remained between 49° and 54°; in seven of these years the temperature has not exceeded 100°, while the extreme highest has been 109°. Zero has been touched every year but one, and the record cold is 34° below zero in 1904. In precipitation, in a similar period, the amount has varied from 37.3 inches to 63.3 inches. This range must be acknowledged to be moderate; conditions of human progress are not unduly modified by a normal recurrence of either of these extremes.

In 1915 it may be said that normal weather occurred in New Jersey; six months were warmer, and six cooler than the average. The cold months of the year, except March and December, were above normal warmth, and it was subnormal in summer. In precipitation, there were seven dry and five wet months, but the excess amount in January, February, July, August, and December, practically equalled the deficiencies of the other months. At several stations the highest temperature of the year occurred on April 25th and 27th, when the temperature rose as high as 96°; the highest for the year was 98° in July and August. The lowest temperature was 5° below zero. The mean temperature of the year was 52.5°, which was 2° above normal. The mean yearly precipitation was 47.43 inches, which was 0.08 inch below normal. The greatest monthly mean was 7.73 inches in August, and the least, 1.13 inches in March. The greatest station monthly amount was 1.06 inches at Hightstown in July, and the least, 0.55 inch in Mlaystown in September. The average total snowfall was 9.6 inches. The average number of days on which 0.01 inch or more precipitation fell was 114, which was normal. The average number of clear days was 145, which was 4 more than normal; partly cloudy, 115, or 1 less than normal, and cloudy, 15, which was 3 below normal. The prevailing wind direction was northwest.

THE WEATHER BY MONTHS.

JANUARY.—All sections of the State were above normal in moisture, the northern margin being slightly less than an inch excess, and from that to considerably more than 3 inches in excess in south-central districts. The only consecutive days on which precipitation did not occur were from the 8th to the 11th, and from the 26th to the 30th; on the other hand, in nearly all sections, precipitation occurred almost daily from the 17th to the 25th. A typical cyclonic storm occurred on the 12th-13th, during which not less than an inch of precipitation occurred, ranging thence to over 3 inches. This rain was driven by a northeast gale that reached hurricane force along the

northeastern shore. With temperatures above freezing and so much rain, practically all ice was melted from lakes and streams at the close of the month.

FEBRUARY. The month will be remembered as lacking many of the usual winter characteristics, more than half the days being considerably above freezing. Not for 22 years has a February passed without a record of zero in some portion of the State, until this month, and the high reading of 75° was within a degree of the record. Streams and ponds remained unfrozen throughout the month. The warm weather pervaded every portion of the State, and the coldest station average was but a small fraction of a degree under freezing, the warmest station was about 7° above freezing. This warmth, of course, precluded the possibility of much snow, which, in fact, averaged more than half a foot less than normal. The month was the rainiest and least snowy since commencement of observations.

MARCH.—The weather this month upset its consistently disagreeable record, and was the coldest and driest since 1885, with more sunshine and fewer rainy days than were ever recorded in March. There have been several colder records, but none in combination with absence of moisture. Stations where instrumental records of humidity, wind, and sunshine, are maintained have never heretofore reported such a low percentage of moisture, high percentage of sunshine, and continuously great movement of northwesterly winds as in the month under review. Approximately two-thirds of the month the wind was northwest, the sky clear, and temperatures below normal. The ground was so dry that considerable plowing was done toward the close of the month.

APRIL.—The principal feature of weather conditions during April was the great snow-storm on the 3d, the Saturday before Easter Sunday. The storm commenced just before daybreak in the southeastern portion, and had overspread the remainder of the State by the middle of the forenoon. The air and ground temperature being considerably above the melting point, the snow at first melted as it fell, and did not accumulate to any great extent until late in the forenoon, from which time accumulation was unusually rapid. The snow was light and its water content low. The storm continued furiously during the afternoon, driven by a northeasterly gale of upwards of 40 miles per hour, and finally ceased about 9 p. m. In central portions of the State the depth of snow averaged about 13 inches and broke all April records, but was less elsewhere. The storm caused little damage, except that business usually incident to Easter Sunday suffered considerably, and personal enjoyment of this festival was greatly curtailed.

The month was the warmest April on record, which aided early growth and farming operations, and most orchard fruit was in bloom by the close of the month.

MAY.—Except in the years 1885 and 1907 this was the coolest May on record, with about the normal amount of rainfall, but the lack of warmth did not unfavorably affect crop growth, which at the close of the month was in a somewhat better condition than normal.

On the 20th one of the most brilliant solar halos of recent occurrence was visible to all portions of the State and adjoining regions. The phenomenon occurred during the noon hours from 11 to 2, and consisted of the circumscribed halo of 22°, the complete halo of 46°, the parhelic circle, and two oblique parhelic circles, all of which were practically complete, except that they were overcome by the brightness of the sun. Photographic negatives disclosed that it was not a simple halo of 22°, but that the horizontal axis was considerably longer than the vertical. The region about the sun, within the Oval of Venturi, was remarkable for its "brilliant" darkness. It seems that the zone of most favorable visibility lay across central New Jersey. The sight of the halo was the basis of much comment and uneasy apprehension.

JUNE.—There was much unpleasant weather during the month, owing to the greater number of rainy days than usually

occur, and to the many hours of northeast winds. Both temperature and amount of rainfall were below normal, while the amount of sunshine was about the same as usual. Crop growth could have been assisted more only by greater warmth, except from attacks of insect enemies, which were greatly favored by the alternately warm and cool, and wet and dry periods.

JULY.—The weather was typical of the mid-summer month, the rainfall varying between wide extremes within a comparatively small area, and being usually attendant upon thunder showers. The heat was less extreme than frequently occurs in July, and was a little below average. There was somewhat more cloudiness than normal, but agriculture made excellent progress, although rain, as usual, interfered with the harvest of grass and grain. All crops at the close of the month were better than average in quantity or quality or both, except apples and pears which were deficient.

AUGUST.—The month opened with a moderate amount of rain, and was followed on the 4th by an almost unprecedented down-pour which occurred at nearly every station in the State. The heaviest amounts fell in portions of Passaic, Essex and Union counties, and on the 4th, 24 hourly amounts of from 4 to nearly 5 inches were reported at 8 stations. As would naturally be expected, ordinary water courses were inadequate to contain the flood, and there was much resulting damage in the vicinity of Plainfield, Bound Brook, New Brunswick and Elizabeth. This rain, and more that occurred later, put much farm land under water, and corn and potatoes in many instances were submerged several inches which caused considerable potato rot. Excess of rain, also, is blamed for a lack of taste in several varieties of farm products, notably peaches and tomatoes, which although more than usually fine in appearance and quantity, were deficient in piquancy of flavor. The temperature and sunshine were slightly subnormal.

SEPTEMBER.—Dry and warm weather was the feature of September and was remarkably fine as favorably affecting out-door interests. Rainy and cloudy days were 40 per cent fewer than normal, and at only a few stations was there more than one thunderstorm. From the 4th to the 20th, daily mean temperatures were constantly above normal. The storm of the 21st, even with its small quantity of rain, but with low barometer and high winds, was popularly considered to have been the "equinoctial", although the pressure was lower and the wind more severe along the coast on the 26th.

The warmth and dryness rapidly brought crops to maturity, with an excellent yield. At the close of the month, harvesting was approaching completion, and fall plowing was about finished.

OCTOBER.—Fine weather continued throughout October, being somewhat warmer and drier than usual. In many respects, the weather of the month averaged much like that of April of this year, and of October five years ago. The lowest temperatures were mostly reported on the 11th, 24th, and 25th, and in a few instances the first killing frosts of autumn occurred on some of these dates, but there were many localities where killing frosts had not occurred up to the close of the month. Late crops, such as sweet potatoes, cranberries, tomatoes and corn had matured or had been harvested without injury before the advent of cold weather, and all farming operations had been carried well forward at the close of the month.

NOVEMBER.—Stormy weather overspread the State on the 2d, 15th, and 19th, and were attended by notable gales, but by little rain and no snow. Throughout the greater portion of the month, the weather was exceptionally fine. It was warmer than normal, with extremes of temperature well within the record, and there was more clear sky and sunshine than usually prevails in November. The lowest temperatures occurred on the 18th, 23d, and at midnight at the close of the month, with readings several degrees below freezing. Snow occurred at several stations, but in amounts too small to measure. The open weather was favorable for winter grain and pastures, and for most out-of-door pursuits.

DECEMBER.—Two storms occurred that were attended by severe gales, the first on the 18th and the second on the 26th. On the 26th, in central and northern portions of the State, the wind ranged from 60 to 90 miles per hour, with barometer readings about 29.0 inches. Christmas Day was the warmest day of the month, and closed in the northeastern portions of the State with a thunderstorm.

A storm of rain and snow on the 13th, extending into the night, caused great damage to electric wire service and in central and northern counties the snow remained on the ground about ten days. The Delaware River was closed with ice throughout most of its course from the 14th to 19th. But the latter half of the month was warmer than the first half, and most of the ice melted.

COMPARATIVE ANNUAL DATA FOR THE STATE.

Year.	Temperature.			Average precipitation.	Year.	Temperature.			Average precipitation.
	Mean.	High-est.	Low-est.			Mean.	High-est.	Low-est.	
1885	50.5	100	-2	37.87	1901	51.4	107	-8	51.80
1886	50.2	98	-10	46.54	1902	51.8	100	-11	59.44
1887	51.1	102	-6	47.66	1903	51.7	100	-16	56.25
1888	50.0	99	-12	52.20	1904	49.3	100	-34	37.41
1889	52.8	95	-3	63.33	1905	51.3	102	-18	42.06
1890	53.2	101	0	49.34	1906	52.8	98	-15	46.38
1891	53.2	102	1	47.98	1907	50.4	96	-22	51.65
1892	51.4	105	-6	42.04	1908	52.6	106	-17	42.58
1893	50.8	103	-21	47.90	1909	52.0	100	-15	40.86
1894	53.0	106	-11	47.37	1910	52.0	99	-15	39.73
1895	51.7	109	-12	37.29	1911	52.6	104	-12	50.36
1896	51.7	105	-15	42.51	1912	51.3	100	-32	46.61
1897	52.0	102	-6	51.72	1913	54.2	100	-11	46.99
1898	53.2	107	-15	52.35	1914	51.4	99	-18	39.23
1899	52.1	103	-21	45.84	1915	52.5	98	-5	47.37
1900	53.8	104	-9	42.71					

MONTHLY STATE DATA FOR 1915.

Month.	Temperature.				Precipitation.			
	Mean.	Depart-ure from normal.	Highest.	Lowest.	Average.	Depart-ure from normal.	Greatest.	Least.
January	33.5	+3.5	61	-5	6.55	+2.74	8.92	4.40
February	35.7	+5.4	75	2	5.37	+1.56	7.28	2.97
March	36.1	+1.9	63	6	1.13	-2.87	1.65	0.58
April	54.4	+5.3	96	20	2.71	-0.78	4.13	1.28
May	58.1	+2.2	88	30	3.82	-0.03	6.15	2.00
June	67.0	+2.3	95	36	3.12	-0.72	6.51	1.40
July	72.8	+1.0	98	44	5.31	+0.49	11.06	2.23
August	70.9	+1.1	98	41	7.73	+2.89	10.92	4.02
September	68.5	+2.8	97	30	2.08	-1.86	4.46	0.55
October	56.2	+2.1	84	23	3.03	-0.70	5.18	1.89
November	44.0	+1.1	75	16	1.69	-1.75	3.11	0.96
December	31.9	+1.2	64	3	4.82	+0.99	7.83	2.19
Year	52.5	+1.0	98	-5	47.37	-0.08	11.06	0.55

* Mean of 36 stations.

** Mean of the sums of 37 stations.

KILLING FROSTS.

Stations.	Last in spring.	First in autumn.	Stations.	Last in spring.	First in autumn.
<i>The Highlands and Kittatinny Valley.</i>			Somerville.....	Apr. 22	Oct. 11
Belvidere.....	Apr. 16	Oct. 11	South Orange.....	do. 5	Nov. 4
Charlotteburg.....	do. 22	Sept. 23	<i>The Southern Interior.</i>		
Culvers Lake.....	May 27	do. 23	Bridgeton.....	Apr. 5	Oct. 24
Dover.....	Apr. 22	Oct. 11	Burlington.....	do. 5	do. 11
Layton.....	May 27	do. 11	Clayton.....	do. 13	do. 25
Newton.....	Apr. 15	do. 11	Haddonfield.....	do. 5	do. 11
Phillipsburg.....	do. 5	Oct. 11	Hightstown.....	do. 22	do. 11
Sussex.....	do. 22	do. 11	Imlaystown.....	do. 22	do. 11
<i>The Red Sandstone Plain.</i>			Indian Mills.....	do. 15	do. 11
Bayonne.....	Apr. 5	Nov. 7	Lakewood.....	do. 22	do. 11
Bergen Point.....	do. 5	Oct. 24	Moorestown.....	do. 15	do. 11
Boonton.....	Apr. 22	do. 11	Trenton.....	do. 5	Nov. 4
Elizabeth.....	do. 22	do. 11	Tuckerton.....	do. 15	Oct. 11
Flemington.....	do. 5	do. 11	Vineland.....	do. 15	do. 11
Highwood.....	do. 22	do. 11	Windbine.....	do. 5	do. 24
Jersey City.....	do. 5	do. 25	<i>The Sea Coast.</i>		
Lambertville.....	do. 5	Nov. 7	Asbury Park.....	Apr. 5	Nov. 4
Little Falls.....	do. 5	do. 4	Atlantic City.....	do. 4	do. 15
Newark.....	do. 4	do. 7	Cape May City.....	Mar. 19	do. 7
New Brunswick.....	do. 5	Oct. 10	Long Branch.....	Apr. 5	do. 4
Paterson.....	do. 5	Nov. 7	Sandy Hook.....	do. 4	do. 2
Plainfield.....	do. 3	Oct. 11			

Climatological Data for the Year 1915.

STATION.	Counties.	Elevation, feet.	Temperature (degrees Fahrenheit).						Precipitation (inches).						Number days with .01 or more.	Sky.			Prevailing direction of wind.	
			Length of record, years.	Annual mean.	Highest.	Date.	Lowest.	Date.	Length of record, years.	Total for the year.	Greatest monthly.	Month.	Least monthly.	Month.		Total snowfall (unmelted).	Number clear days.	Number partly cloudy days.		Number cloudy days.
<i>The Highlands and Kittatinny Valley.</i>																				
Melvidere.....	Warren.....	289	24	51.7	96	Apr. 25	8	Jan. 30	24	46.62	6.65	Jan	0.76	Mar	.....	98	.....	.....	.....	.....
Charlotteburg.....	Passaic.....	719	23	49.1	92	Sept. 9	3	Dec. 22	23	45.09	9.34	Aug	0.76	Mar	.....	94	.....	.....	.....	nw.
Culvers Lake.....	Sussex.....	848	.....	.....	.....	.....	-5	Jan. 30	14	46.51	8.24	Aug	0.78	Mar	.....	129	217	65	83	e.
Dover.....	Morris.....	600	31	49.4	93	Apr. 25	6	Jan. 30	31	55.98	8.57	Aug	1.26	Mar	63.8	115	.....	.....	.....	.....
Layton.....	Sussex.....	480	16	.....	94	Apr. 25	.....	.....	16	.....	.....	.....	0.98	Mar	.....	.....	.....	.....	.....	.....
Newton.....	Warren.....	678	35	.....	.....	.....	.....	.....	35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Phillipsburg.....	Sussex.....	363	25	52.5	95	Apr. 25	9	Jan. 30	33	45.95	7.55	Aug	0.93	Mar	37.5	124	201	63	101	nw.
Sussex.....	Sussex.....	442	21	49.8	93	Sept. 16	5	Jan. 30	25	.....	6.08	Dec	0.60	Mar	58.0	.....	.....	.....	.....	nw.
<i>The Red Sandstone Plain.</i>																				
Bayonne.....	Hudson.....	50	25	.....	.....	.....	11	Jan. 30	25	44.58	6.58	Jan	0.83	Mar	40.0	115	.....	.....	.....	.....
Bergen Point.....	Hudson.....	37	18	52.4	95	†Sept. 9	10	Jan. 30	18	55.23	7.87	Aug	1.08	Mar	35.0	105	.....	.....	.....	nw.
Boonton.....	Morris.....	400	1	50.8	95	Sept. 9	9	Jan. 5	25	50.74	9.55	Aug	0.80	Mar	39.4	124	.....	.....	.....	nw.
Chatham.....	Morris.....	234	.....	.....	.....	.....	.....	.....	13	.....	10.31	Aug	0.96	Mar	.....	.....	.....	.....	.....	.....
Elizabeth.....	Union.....	45	36	53.1	97	Sept. 9	10	Jan. 30	36	53.22	8.22	Aug	1.56	Mar	46.0	127	118	150	97	nw.
Flemington.....	Hunterdon.....	140	18	52.9	95	Apr. 25	10	Jan. 30	27	50.56	8.07	Aug	1.27	Mar	47.2	131	188	90	87	nw.
Highwood.....	Bergen.....	90	26	50.3	92	Apr. 27	9	Jan. 30	26	51.08	8.77	Aug	0.97	Mar	.....	110	114	147	104	nw.
Jersey City.....	Hudson.....	10	16	53.9	95	July 31	12	Jan. 30	16	49.40	7.08	Aug	1.19	Mar	41.3	120	125	137	103	nw.
Lambertville.....	Hunterdon.....	80	28	54.1	93	†July 31	13	Jan. 30	28	47.26	7.70	Aug	1.33	Sept	33.7	107	.....	.....	.....	nw.
Little Falls.....	Passaic.....	180	1	51.0	94	July 31	9	Jan. 30	12	51.44	8.70	Aug	1.27	Mar	.....	116	.....	.....	.....	w.
Newark.....	Essex.....	159	72	53.0	95	July 31	9	Jan. 30	73	46.36	8.10	Jan	0.90	Mar	42.9	122	144	68	153	nw.
New Brunswick.....	Middlesex.....	139	62	52.4	92	July 31	10	Jan. 30	62	48.42	10.63	Aug	0.75	Mar	32.9	113	181	114	70	nw.
Paterson.....	Passaic.....	80	44	53.4	95	†Apr. 27	11	Jan. 30	44	48.76	9.21	Aug	1.05	Mar	54.1	118	86	198	81	nw.
Plainfield.....	Union.....	100	29	52.2	94	Apr. 27	10	Jan. 30	29	54.44	9.78	Aug	1.41	Mar	50.3	130	126	145	94	nw.
Pompton Plains.....	Morris.....	195	.....	.....	.....	.....	.....	.....	13	50.62	8.03	Aug	1.05	Mar	.....	108	.....	.....	.....	nw.
Somerville.....	Somerset.....	60	33	51.6	94	July 31	9	Jan. 30	33	48.15	10.85	Aug	0.73	Mar	.....	108	149	114	102	nw.
South Orange.....	Essex.....	200	45	51.8	90	†Apr. 27	10	Jan. 30	45	53.25	9.25	Aug	0.76	Mar	53.7	109	152	101	112	nw.
New York, N. Y.....		365	45	52.6	92	July 31	10	Jan. 30	45	40.83	5.61	Jan	1.09	Nov	32.5	127	104	116	145	nw.
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	29	54.9	98	Aug. 1	13	Feb. 10	34	46.05	10.92	Aug	1.15	Nov	30.0	89	199	67	99	w.
Burlington.....	Burlington.....	12	2	53.4	95	Aug. 1	12	Jan. 30	29	52.42	8.52	July	1.18	Nov	34.3	116	.....	.....	.....	nw.
Clayton.....	Gloucester.....	126	19	53.8	98	Aug. 1	9	Jan. 30	23	.....	8.68	Aug	0.80	Mar	.....	.....	.....	.....	.....	.....
Haddonfield.....	Camden.....	75	21	53.3	96	Aug. 1	11	Jan. 30	28	48.58	6.99	Feb	0.86	Sept	56.8	127	122	158	85	nw.
Hightstown.....	Mercer.....	140	23	52.6	94	Sept. 14	11	Jan. 30	23	.....	11.06	July	1.33	Sept	.....	.....	.....	.....	.....	w.
Imlaystown.....	Monmouth.....	185	27	52.0	94	Sept. 14	10	Jan. 30	27	46.05	7.85	July	0.55	Sept	33.5	108	.....	.....	.....	w.
Indian Mills.....	Burlington.....	76	26	53.0	95	†Apr. 27	9	Jan. 30	26	49.65	9.70	Aug	0.97	Sept	43.0	117	161	125	79	nw.
Lakewood.....	Ocean.....	54	12	51.5	93	Apr. 27	9	Jan. 22	12	51.83	8.92	Jan	1.46	Mar	.....	108	120	107	138	.....
Moorestown.....	Burlington.....	75	53	53.8	94	Aug. 1	12	Jan. 30	53	47.60	6.42	Feb	0.69	Sept	.....	107	.....	.....	.....	nw.
Northfield.....	Atlantic.....	25	.....	.....	.....	.....	.....	.....	8	39.10	6.38	Aug	0.92	Sept	18.4	107	.....	.....	.....	.....
Pleasantville.....	Atlantic.....	26	.....	.....	.....	.....	.....	.....	17	40.68	7.07	Aug	0.85	Sept	.....	107	.....	.....	.....	.....
Trenton.....	Mercer.....	190	44	52.9	94	Aug. 1	12	Jan. 30	44	41.79	7.20	July	0.62	Sept	39.4	128	112	122	131	nw.
Tuckerton.....	Ocean.....	23	17	.....	98	July 17	13	Jan. 5	22	.....	7.64	Aug	1.25	Mar	.....	.....	.....	.....	.....	nw.
Vineland.....	Cumberland.....	87	47	54.1	95	Aug. 1	11	Feb. 10	47	39.17	7.40	Aug	0.87	Mar	.....	109	.....	.....	.....	nw.
Woodbine.....	Cape May.....	43	24	54.1	96	Aug. 1	12	Jan. 1	24	45.66	7.25	Jan	0.77	Sept	.....	110	.....	.....	.....	.....
Philadelphia, Pa.....		117	45	55.3	96	Aug. 1	14	Jan. 30	45	44.83	6.84	Aug	0.46	Sept	37.5	123	130	119	116	nw.
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	26	52.2	92	July 31	10	Jan. 30	26	.....	6.50	Jan	0.60	Sept	30.4	117	153	101	111	w.
Atlantic City.....	Atlantic.....	16	42	53.2	93	July 31	15	Jan. 30	42	35.82	5.28	Jan	0.60	Sept	15.6	114	132	97	136	nw.
Cape May City.....	Cape May.....	17	31	54.1	92	†July 31	16	Jan. 30	31	35.37	5.22	Aug	0.70	Sept	16.8	118	142	137	86	nw.
Long Branch.....	Monmouth.....	25	8	52.0	96	Sept. 9	10	Jan. 30	8	48.91	8.72	Jan	1.65	Mar	30.4	116	122	94	149	nw.
Sandy Hook.....	Monmouth.....	22	17	52.8	92	Sept. 9	14	Jan. 30	17	40.47	6.72	Aug	0.58	Mar	22.9	122	125	128	112	nw.

† On other days also.

Monthly and Annual Precipitation for the Year 1915, with Departures from the Normal.

STATIONS.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.		Annual.	
	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.
<i>The Highlands and Kittatinny Valley.</i>																										
Belvidere.....	6.65	+2.90	5.74	+1.42	0.76	-3.28	2.95	-0.32	3.53	-0.36	1.87	-2.53	4.74	-0.86	6.27	+1.31	3.45	-0.47	3.04	-0.80	2.56	-0.93	5.06	+0.92	46.62	-3.00
Charlotteburg.....	4.79	+0.43	3.43	-1.23	0.76	-3.18	2.90	-1.03	3.46	-1.34	2.64	-1.62	4.67	-0.21	9.34	+4.59	2.70	-1.98	3.22	-1.19	2.83	-0.90	4.35	-0.04	45.09	-7.70
Culvers Lake.....	5.89	+2.71	4.93	+1.58	0.78	-2.65	2.96	-0.91	3.32	-0.18	2.00	-1.84	5.90	+1.14	8.24	+3.71	2.73	-1.08	3.27	-0.38	1.69	-1.13	4.80	+1.27	46.51	+2.24
Dover.....	7.75	+3.25	6.41	+2.17	1.26	-2.64	4.07	+0.56	4.26	+0.12	2.10	-2.02	4.59	-0.89	8.57	+3.57	3.74	-0.74	3.57	-0.43	2.52	-1.11	7.14	+3.02	55.98	+4.87
Layton.....	.....	.....	.....	.....	0.98	-2.69	2.47	-0.84	3.47	+0.14	2.93	-0.49	7.54	+3.11	6.87	+3.23	2.12	-1.75	2.98	-0.35	2.13	-0.95	5.53	+1.36	.....	.....
Newton.....	7.03	+3.53	.....	.....	1.21	-2.39	2.88	-0.33	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Phillipsburg.....	5.71	+2.06	5.34	+1.55	0.93	-2.72	3.04	+0.02	3.77	-0.28	2.20	-1.95	3.05	-0.90	7.55	+2.85	3.23	-0.55	3.49	-0.11	2.09	-1.19	4.65	+0.97	45.95	-0.25
Sussex.....	4.57	+0.96	4.00	+0.46	0.60	-3.07	2.32	-0.93	3.09	-0.82	2.00	-1.73	5.84	+1.32	5.77	+1.45	3.04	-0.87	.....	.....	.....	.....	6.08	+2.34	.....	.....
<i>The Red Sandstone Plain.</i>																										
Bayonne.....	6.58	+2.45	5.91	+1.90	0.83	-3.40	2.64	-1.04	3.70	+0.12	2.81	-0.83	5.64	+0.51	6.54	+1.43	1.99	-1.90	2.34	-1.31	1.39	-2.14	4.21	+0.69	44.58	-3.52
Bergen Point.....	7.56	+3.14	6.33	+1.94	1.08	-3.14	4.13	+0.24	3.88	-0.10	3.32	-0.63	7.32	+1.81	7.87	+2.81	1.92	-2.61	4.07	-0.01	3.11	-0.47	4.64	+0.65	55.23	+3.63
Bonnton.....	5.89	+1.69	5.48	+1.27	0.80	-2.94	3.91	+0.15	3.76	-0.49	2.72	-1.02	3.49	-1.97	9.55	+4.16	4.46	-0.03	3.26	-0.58	1.80	-1.87	5.62	+1.52	50.74	-0.11
Chatham.....	.....	.....	5.62	+1.76	0.96	-2.91	2.69	-0.96	3.13	-0.79	2.30	-1.74	9.49	+4.21	10.31	+5.39	3.07	-1.06	3.60	-0.07	1.95	-1.54	4.44	+0.63	.....	.....
Elizabeth.....	6.84	+2.74	7.28	+3.02	1.56	-2.70	3.42	-0.15	3.35	-0.57	3.69	+0.09	7.31	+2.05	8.22	+3.68	2.24	-1.82	2.72	-1.10	1.70	-1.64	4.89	+1.10	53.22	+4.70
Flemington.....	5.64	+2.17	6.42	+3.03	1.27	-2.34	3.49	+0.05	3.94	-0.35	2.67	-1.70	5.98	+1.02	8.07	+3.66	3.86	-0.12	2.35	-1.10	2.03	-1.32	4.84	+1.16	50.56	+4.16
Highwood.....	7.46	+3.39	6.37	+1.84	0.97	-3.18	2.49	-0.90	3.72	-0.12	2.93	-0.85	5.30	-0.07	8.77	+3.70	2.18	-1.98	3.25	-1.28	1.93	-1.70	5.71	+1.55	51.08	+0.40
Jersey City.....	6.98	+3.12	6.11	+2.17	1.19	-2.91	2.72	-0.98	4.04	+0.86	4.76	+1.46	4.59	-0.19	7.08	+2.43	2.91	-0.80	2.55	-1.20	1.60	-1.80	4.87	+1.31	49.40	+3.47
Lambertville.....	5.56	+1.82	6.56	+3.02	1.47	-2.64	3.17	-0.23	3.89	-0.18	2.55	-1.73	7.23	+2.19	7.70	+2.94	1.33	-2.85	1.89	-1.98	2.19	-1.42	3.72	-0.06	47.26	-1.12
Little Falls.....	7.16	+2.94	4.36	+0.07	1.27	-2.72	2.74	-0.80	3.75	-1.01	4.06	-0.22	2.70	-2.89	8.70	+3.59	3.51	-1.09	3.33	-0.51	2.03	-1.49	7.83	+3.99	51.44	-0.14
Newark.....	8.10	+4.34	4.16	+0.48	0.90	-3.03	3.11	-0.62	3.28	-0.76	3.61	-0.02	4.51	-0.22	7.77	+2.53	3.01	-0.84	2.87	-0.90	1.48	-2.02	3.56	-0.24	46.36	-1.30
New Brunswick.....	6.03	+2.22	5.81	+2.12	0.75	-3.16	2.75	-1.04	3.87	-0.04	2.66	-1.11	5.96	+0.91	10.63	+5.54	2.06	-1.79	2.13	-1.46	1.61	-1.98	4.16	+0.41	48.42	+0.62
Paterson.....	6.85	+2.79	5.94	+1.54	1.05	-3.18	3.05	-0.44	3.53	-0.96	2.18	-2.14	4.03	-1.30	9.21	+4.08	3.20	-1.24	2.90	-1.25	1.85	-1.41	4.97	+0.86	48.76	-2.65
Plainfield.....	6.90	+3.01	6.61	+2.70	1.41	-2.40	3.17	-0.73	3.73	-0.10	3.88	-0.25	6.95	+1.55	9.78	+4.91	2.06	-2.39	2.56	-1.09	1.67	-1.92	5.72	+1.83	54.44	+5.12
Pompton Plains.....	6.19	+1.80	6.24	+1.81	1.05	-2.99	3.42	-0.14	3.20	-1.16	1.92	-2.24	4.90	-0.65	8.03	+2.95	3.39	-1.16	3.50	-0.26	2.34	-1.15	6.44	+2.70	50.62	-0.49
Somerville.....	6.28	+2.80	5.90	+2.35	0.73	-3.22	2.47	-1.08	3.79	-0.33	1.54	-2.61	6.05	+0.92	10.85	+6.14	2.25	-1.41	1.99	-1.42	1.47	-1.92	4.83	+1.26	48.15	+1.48
South Orange.....	7.25	+3.11	6.29	+2.27	0.76	-3.05	3.07	-0.42	3.54	+0.08	2.77	-0.79	6.22	+1.10	9.25	+3.86	2.90	-1.19	2.68	-1.13	1.78	-1.59	6.74	+2.91	53.25	+5.16
New York, N. Y.....	5.61	+1.82	5.03	+1.29	1.14	-2.96	2.10	-1.20	3.23	+0.05	3.66	+0.40	4.60	+0.06	5.37	+0.84	2.52	-1.07	2.25	-1.46	1.09	-2.35	4.23	+0.78	40.83	-3.80
<i>The Southern Interior.</i>																										
Bridgeton.....	6.13	+2.39	4.13	+0.03	1.25	-3.22	1.34	-2.09	3.55	-0.38	5.88	+2.11	3.29	-1.14	10.92	+6.18	1.41	-2.40	3.59	+0.06	1.15	-2.11	3.41	-0.46	46.05	-1.03
Burlington.....	7.27	+3.73	6.65	+2.91	1.53	-2.55	3.18	-0.19	4.62	+0.39	3.20	-0.72	8.52	+3.49	7.78	+2.17	1.33	-2.59	2.21	-1.24	1.18	-2.56	4.95	+1.04	52.42	+3.88
Clayton.....	.....	.....	5.59	+1.57	0.80	-3.18	1.06	+0.92	4.21	+0.95	4.58	+1.18	4.23	-0.04	8.68	+3.53	1.30	-2.72	3.17	-0.34	1.02	-2.51	.....	.....	.....	.....
Haddonfield.....	6.52	+3.13	6.99	+3.67	1.58	-2.31	3.36	+0.26	6.15	+2.24	3.15	-0.46	4.62	+0.32	6.61	+2.02	0.86	-2.88	2.65	-0.49	1.47	-1.85	4.62	+0.97	48.38	+4.62
Hammononton.....	6.93	+2.98	4.51	+0.62	1.10	-3.27	2.07	-1.77	5.21	+1.19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hightstown.....	7.20	+3.51	5.89	+2.15	1.35	-3.01	3.49	-0.42	4.50	+0.68	1.57	-2.44	11.06	+5.09	6.56	+1.79	1.33	-2.55	2.11	-2.12	1.45	-2.21	.....	.....	.....	.....
Inlaystown.....	6.15	+2.70	5.65	+2.07	1.50	-2.69	2.81	-0.69	4.51	+0.62	2.10	-1.88	7.85	+2.83	5.35	+0.49	0.55	-3.76	2.65	-1.42	1.57	-2.09	5.36	+1.79	46.05	-2.03
Indian Mills.....	7.46	+3.76	5.60	+1.64	1.17	-2.93	3.45	+0.32	4.14	+0.10	3.66	-0.13	3.58	-0.48	9.70	+4.53	0.97	-3.20	3.93	+0.35	1.34	-2.26	4.65	+0.56	49.65	+2.26
Lakewood.....	8.92	+5.14	5.52	+1.68	1.46	-2.97	1.75	-1.98	3.90	+0.04	3.27	-0.40	6.31	+1.28	7.40	+2.33	2.85	-1.03	3.01	-0.69	1.82	-1.83	5.62	+1.90	51.83	+3.47
Moorestown.....	6.15	+2.67	6.42	+2.79	1.35	-2.46	2.84	-0.35	5.77	+1.74	4.11	+0.31	5.88	+1.30	5.75	+1.01	0.69	-3.07	2.37	-1.27	1.37	-2.05	4.90	+1.32	47.60	+1.94
Northfield.....	5.77	.....	3.54	.....	1.40	.....	1.49	.....	3.66	.....	3.32	.....	3.39	.....	6.38	.....	0.92	.....	3.83	.....	1.46	.....	3.94	.....	39.10	.....
Pleasantville.....	6.09	+2.69	2.97	+0.01	1.36	-1.88	1.28	-2.24	3.66	+0.30	5.25	+1.48	3.44	-0.70	7.07	+2.38	0.85	-2.56	3.74	+0.12	1.52	-1.84	3.45	-0.22	40.68	-2.46
Trenton.....	5.15	+1.98	4.40	+1.21	1.37	-2.67	3.04	-0.25	4.33	+0.81	2.07	-1.42	7.20	+2.43	6.22	+0.85	0.62	-2.97	1.99	-1.42	0.96	-2.47	4.44	+1.28	41.79	-2.64
Tuckerton.....	7.37	+3.71	.....	.....	1.25	-3.14	1.69	-2.10	4.68	+1.25	1.30	+0.53	2.23	-1.67	7.64	+1.86	2.78	-0.58	5.18	+1.51	.....	.....	5.46	+1.18	.....	.....
Vineyard.....	6.46	+2.69	3.83	-0.22	0.87	-3.29	1.55	-1.79	3.48	-0.29	3.92	+0.34	4.26	-0.25	7.40	+2.43	1.47	-2.37	2.72	-0.74	1.02	-2.28	2.19	-1.65	39.17	-7.42
Woodbine.....	7.25	+3.60	3.93	-0.12	1.53	-2.55	1.96	-1.62	3.74	-0.16	6.51	+3.01	4.98	+0.96	6.48	+2.18	0.77	-3.26	3.57	-0.02	1.25	-1.90	3.69	-0.21	45.66	-0.09
Philadelphia, Pa.....	6.74	+3.33	5.55	+2.17	1.00	-2.45	4.23	+1.32	4.12	+0.92	3.45	+0.15	5.02	+0.69	6.84	+2.23	0.46	-2.92	1.98	-1.12	1.22	-1.84	4.22	+1.18	44.83	+3.66
<i>The Sea Coast.</i>																										
Asbury Park.....	6.50	+2.76	4.47	+0.64	.....	.....	1.70	-1.97	2.00	-1.71	1.40	-2.40	2.46	-2.79	4.02	-1.12	0.60	-2.64	1.95	-1.83	1.02	-2.25	3.51	-0.13	.....	.....
Atlantic City.....	5.28	+1.88	3.69	+0.42	1.29	-2.44	2.17	-0.82	3.21	+0.21	2.40	-0														

Monthly and Annual Mean Temperatures for the Year 1915, with Departures from the Normal.

	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.		Annual.	
STATIONS.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.
The Highlands and Kittling Valley.																										
Alvordville.....	31.4	+3.9	34.2	+6.8	35.7	-1.1	55.8	+6.2	57.6	-3.1	67.6	-1.4	72.8	+0.1	69.4	-1.4	67.4	+2.3	55.1	+2.6	42.6	+1.4	30.8	0.0	51.7	+1.4
Charlotteburg.....	29.5	+2.4	32.4	+6.1	32.7	-2.0	52.5	+5.8	54.3	-3.0	63.8	-1.7	69.2	-0.3	67.2	-0.5	65.4	+3.1	52.4	+2.0	41.4	+0.9	28.3	-2.3	49.1	+0.9
Lynton.....	29.3	+2.7	31.8	+5.6	33.2	-1.7	52.4	+5.1	55.2	-3.4	65.4	-1.8	70.6	-0.8	67.6	-1.6	66.0	+3.4	52.2	+1.5	40.8	+0.5	27.8	-2.3	49.4	+0.6
Lynton.....	29.3	.....	.....	.....	33.0	-1.2	53.0	+6.5	54.7	-3.2	65.1	-1.2	70.6	+0.4	67.8	-0.6	66.5	+4.7	53.4	+3.8	40.7	+2.3	27.6	+0.2	.....	.....
Newton.....	28.4	+2.7	.....	.....	32.6	-3.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Phillipsburg.....	31.8	+3.9	35.0	+7.2	35.7	-2.2	56.3	+6.7	58.6	-2.7	68.8	-0.9	73.8	-0.2	71.0	-0.7	69.1	+3.7	56.3	+3.4	43.0	+1.4	30.8	-0.5	52.5	+1.6
Rocky Hill.....	29.8	+3.7	32.4	+6.2	33.4	-3.0	53.4	+5.1	55.2	-4.7	65.3	-2.3	70.9	-0.8	67.7	-1.9	66.7	+2.8	53.8	+1.6	40.4	-0.1	28.4	-1.4	49.8	+0.4
The Red Sandstone Plain.																										
Alvordville.....	33.9	+3.8	35.2	+4.7	36.3	-1.7	53.9	+4.9	58.6	-1.7	67.4	-2.3	73.4	-1.0	71.6	-1.3	.....	.....	56.8	+1.5	44.8	+1.8	32.6	-0.8	.....	.....
Argen Point.....	33.8	+3.6	34.4	+4.0	36.4	-1.4	54.1	+5.6	58.3	-1.4	66.6	-2.2	72.4	-1.0	70.8	-0.9	69.1	+2.4	56.1	+1.8	44.4	+1.4	32.4	-0.6	52.4	+0.9
Lynton.....	31.6	.....	33.8	.....	35.1	.....	54.0	.....	56.0	.....	66.0	.....	71.3	.....	69.8	.....	67.1	.....	53.5	.....	42.4	.....	29.4	.....	50.8	.....
Lizabeth.....	33.5	+3.4	35.8	+5.4	37.2	-1.2	55.0	+4.2	58.7	-3.5	68.4	-2.8	73.7	-1.8	71.8	-1.7	70.0	+3.0	57.0	+2.3	44.0	+0.4	32.0	-1.5	53.1	+0.5
Remington.....	32.8	+3.2	36.3	+5.8	37.0	-0.5	55.9	+6.8	58.8	-1.1	68.1	-1.0	73.5	-0.4	71.2	-0.6	69.2	+4.1	56.8	+2.7	43.7	+0.9	31.6	-0.4	52.9	+1.6
Highwood.....	32.0	+3.1	33.4	+4.7	34.8	-1.4	51.8	+3.3	55.8	-3.9	65.6	-2.7	71.4	-1.1	68.0	-3.2	66.4	+2.2	53.4	+0.7	41.8	-0.5	29.6	-2.8	50.3	-0.1
Arsey City.....	34.5	+3.7	36.0	+4.8	37.6	-0.6	55.4	+6.0	59.6	-1.5	69.4	-0.6	74.5	-0.2	72.5	-0.8	70.8	+3.6	57.4	+1.8	45.5	+1.9	33.4	-0.6	53.9	+1.5
Lumbertville.....	36.1	+5.7	38.0	+7.6	38.4	-0.6	57.2	+6.8	59.7	-2.0	68.7	-1.6	73.8	-0.7	71.6	-0.8	69.6	+3.6	58.0	+4.4	45.1	+2.1	33.4	+0.1	54.1	+2.0
Little Falls.....	32.0	.....	34.4	.....	35.1	.....	52.8	.....	56.1	.....	67.2	.....	72.0	.....	68.8	.....	66.5	.....	53.5	.....	42.0	.....	31.8	.....	51.0	.....
Newark.....	34.1	+4.5	36.4	+6.6	37.3	-0.2	54.5	+5.4	59.0	-1.8	68.2	-1.5	73.5	-0.8	70.9	-1.7	69.4	+3.5	56.3	+1.9	44.6	+1.7	31.8	-1.2	53.0	+1.4
Van Brunswick.....	33.4	+2.9	35.8	+4.5	36.6	-1.6	55.1	+5.4	58.6	-2.0	67.4	-2.2	72.7	-1.6	70.2	-2.2	68.4	+2.4	56.2	+1.6	43.4	-0.2	31.3	-1.8	52.4	+0.4
Waterson.....	33.8	+4.4	35.8	+5.6	37.8	-0.7	56.2	+5.9	59.7	-1.6	68.8	-1.3	73.9	-0.4	71.1	-0.9	69.7	+3.5	57.1	+2.7	45.1	+1.8	32.2	-0.9	53.4	+1.5
Winfield.....	33.3	+3.9	35.6	+5.4	36.2	-0.4	55.1	+6.9	57.6	-2.7	67.0	-2.3	72.2	-1.7	69.8	-2.3	68.1	+2.9	55.6	+2.6	43.6	+1.6	31.8	-0.1	52.2	+1.2
Wermerville.....	32.4	+3.2	35.6	+5.6	35.8	-1.1	54.2	+5.5	57.0	-3.1	66.6	-2.6	72.0	-1.9	70.3	-1.6	67.9	+2.6	55.1	+1.7	42.2	0.0	30.2	-1.7	51.6	+0.6
South Orange.....	33.0	+4.3	34.4	+5.4	36.6	-1.2	54.0	+5.7	57.8	-2.2	67.3	-1.5	72.2	-0.9	69.8	-0.9	67.5	+3.4	54.8	+1.9	43.8	+2.2	31.4	-0.6	51.8	+1.3
New York, N. Y.....	34.1	+3.9	35.2	+4.5	36.4	-1.1	53.4	+5.3	57.7	-1.6	66.6	-1.9	72.5	-1.0	70.4	-1.8	69.0	+2.5	56.7	+1.1	45.4	+1.4	33.5	-0.9	52.6	+0.9
The Southern Interior.																										
Wadgeton.....	35.8	+2.8	38.0	+4.1	38.3	-2.8	57.4	+5.6	61.6	-2.3	69.2	-4.2	75.4	-1.7	73.8	-1.3	70.3	+2.1	58.9	+2.2	46.0	+1.1	34.2	-1.4	54.9	+0.4
Wilmington.....	33.6	.....	36.4	.....	36.4	.....	55.5	.....	58.0	.....	67.9	.....	74.4	.....	72.3	.....	70.4	.....	57.6	.....	44.9	.....	32.8	.....	53.4	.....
Lynton.....	35.1	+4.2	37.5	+5.8	37.0	-2.8	55.9	+5.6	59.7	-2.2	67.4	-4.0	74.8	-1.2	72.4	-1.1	69.9	+3.2	57.8	+2.7	45.1	+1.7	33.2	-0.8	53.8	+0.9
Waddonfield.....	35.0	+5.0	37.2	+5.7	37.2	-2.0	56.0	+5.2	58.7	-3.0	67.8	-2.9	74.0	-1.5	71.3	-1.6	69.0	+3.0	56.8	+3.1	44.1	+1.5	32.8	-0.5	53.3	+1.0
Wightstown.....	34.1	+3.2	35.7	+5.6	35.8	-3.2	54.7	+4.9	58.0	-3.1	67.4	-2.0	73.1	-0.9	71.4	-0.5	68.3	+1.7	57.2	+3.5	43.8	+0.2	32.0	-1.6	52.6	+0.6
Wlaystown.....	33.2	+1.5	36.6	+5.7	34.3	-5.4	53.6	+3.0	57.6	-4.6	67.8	-3.0	72.0	-3.2	70.0	-3.1	67.6	+0.9	56.4	+1.5	43.4	-0.9	31.4	-3.2	52.0	-0.9
Wlan Mills.....	34.6	+3.2	37.2	+5.1	36.0	-3.8	55.6	+5.3	59.3	-2.7	67.1	-3.9	73.2	-1.9	71.8	-1.3	68.6	+2.5	56.4	+2.0	44.1	+0.7	32.5	-1.5	53.0	+0.3
Wkewood.....	33.2	+1.1	36.0	+6.2	34.8	-5.2	53.5	+3.9	57.4	-3.1	65.6	-2.0	71.9	-1.0	70.4	-0.3	66.6	+1.2	54.2	-1.1	42.8	-0.4	31.6	-2.2	51.5	-0.3
Worestown.....	35.6	+5.5	37.9	+6.9	37.4	-1.4	56.0	+6.0	60.0	-1.1	68.2	-2.0	73.4	-1.4	71.6	-0.9	69.4	+3.4	58.0	+3.8	45.0	+2.0	33.3	0.0	53.8	+1.7
Wrenton.....	34.0	+3.5	36.0	+5.3	36.0	-3.1	54.9	+5.1	58.4	-2.7	67.8	-1.7	73.7	-0.8	70.9	-2.1	69.4	+2.5	56.6	+1.0	44.5	+0.1	32.4	-2.0	52.9	+0.4
Wckerton.....	34.6	+2.9	.....	.....	37.0	-2.0	53.2	+5.3	58.4	-1.3	67.7	-1.3	73.6	-0.5	72.4	+0.2	69.0	+3.0	56.4	+1.6	44.8	+0.8	33.4	-1.1	.....	.....
Wreland.....	35.8	+3.8	38.2	+5.7	37.0	-3.3	56.0	+5.3	60.6	-1.6	68.0	-3.6	74.2	-2.2	73.1	-0.5	70.2	+3.3	57.9	+2.5	45.2	+1.3	33.3	-1.1	54.1	+0.8
Wrodbine.....	35.8	+3.4	38.6	+6.0	37.6	-2.5	55.1	+5.6	60.4	0.0	66.9	-2.1	73.6	-0.3	73.4	+1.2	69.2	+2.9	58.4	+2.8	45.8	+1.8	34.4	-0.6	54.1	+1.5
Wrodelphia, Pa.....	36.6	+4.8	38.8	+6.0	38.7	-1.3	57.3	+6.5	60.8	-1.4	69.6	-1.6	76.0	+0.2	73.1	-0.7	71.4	+4.0	59.4	+3.1	47.4	+2.5	35.0	-0.7	55.3	+1.8
The Sea Coast.																										
Wbury Park.....	34.8	+3.4	35.6	+3.7	37.0	-1.3	51.5	+3.4	58.1	-0.6	63.6	-4.6	71.4	-1.5	71.8	-0.1	67.6	+0.7	55.6	0.0	46.1	+1.9	32.8	-1.7	52.2	+0.3
Wlantic City.....	35.9	+3.4	36.5	+3.5	37.1	-1.7	51.8	+4.2	58.1	+0.6	64.6	-2.2	72.6	+0.1	72.9	+0.3	69.6	+2.0	58.0	+0.6	46.6	+1.1	34.8	-1.6	53.2	+0.9
Wpe May City.....	36.4	+2.3	37.5	+3.4	38.8	-2.0	53.0	+4.6	59.0	+0.4	65.6	-2.1	72.8	-0.6	73.2	-0.2	70.0	+1.0	59.4	-0.2	48.0	+0.6	35.6	-2.4	54.1	+0.4
Wp Branch.....	33.4	.....	34.3	.....	36.0	.....	51.6	.....	57.0	.....	64.6	.....	71.6	.....	72.2	.....	69.0	.....	56.2	.....	45.7	.....	33.0	.....	52.0	.....
Wndy Hook.....	34.6	+4.9	35.2	+4.5	36.6	-0.1	51.8	+5.1	58.0	-0.8	65.6	-2.8	72.9	-1.0	71.4	-1.3	69.5	+2.1	57.8	+1.1	46.0	+1.5	33.6	-1.0	52.8	+1.0

Letters of alphabet denote number of days missing.

Monthly Maximum Temperatures for the Year 1915, with Dates.

STATIONS.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.	
	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.
<i>The Highlands and Kittatinny Valley.</i>																								
Belvidere.....	59	19	57	20	57	23	96	25	79	†11	88	†14	92	31	91	1	90	†15	82	15	68	†1	56	25
Charlotteburg.....	57	19	54	15	55	25	91	25	78	31	90	14	91	31	88	16	92	9	75	21	67	1	51	26
Dover.....	56	†18	55	15	57	25	93	25	79	11	92	14	90	31	87	14	91	†14	77	†15	68	1	50	18
Layton.....					59	25	94	25	79	†8	89	14	91	31	90	1	93	16	80	15	67	1	52	26
Newton.....	57	19			56	25	90	†25																
Phillipsburg.....	59	19	56	20	58	25	95	25	79	†11	92	15	94	31	94	1	94	14	82	15	70	†1	56	26
Sussex.....	59	19	60	23	58	25	90	†25	79	11	88	14	92	31	89	1	93	16	81	15	65	†1	53	26
<i>The Red Sandstone Plain.</i>																								
Bayonne.....	59	†18	61	15	59	25	93	27	80	†8	89	12	93	31	90	16	.....	.....	80	15	69	1	58	25
Bergen Point.....	59	18	62	15	59	25	93	27	80	†8	89	14	92	†17	89	†13	95	†9	80	15	69	1	58	25
Boonton.....	59	19	58	23	53	†13	93	25	77	11	91	14	94	31	91	1	95	9	74	†21	68	1	51	25
Elizabeth.....	59	19	66	15	61	25	96	27	83	22	95	14	96	31	90	†1	97	9	84	15	71	1	56	†25
Flemington.....	59	19	61	15	60	25	95	25	80	22	92	14	94	31	92	1	94	9	80	†15	73	1	55	25
Highwood.....	58	19	57	15	59	25	92	27	78	11	89	14	91	17	86	16	90	16	76	21	69	1	53	26
Jersey City.....	56	7	54	15	60	25	94	27	80	†11	90	14	95	31	91	16	94	9	78	15	70	1	54	18
Lambertville.....	61	19	63	15	59	25	90	27	78	†8	88	15	93	31	93	1	92	14	77	15	71	1	54	25
Little Falls.....	60	19	57	†15	58	25	90	†25	78	11	93	14	94	31	92	1	91	9	78	†14	69	1	55	25
Newark.....	59	18	62	15	60	25	94	27	79	†8	93	14	95	31	90	16	93	9	80	15	70	1	54	25
New Brunswick.....	60	19	65	15	58	25	91	27	81	9	90	14	92	31	90	1	91	†9	79	15	70	1	57	†25
Paterson.....	58	19	56	†15	62	25	95	27	82	11	93	14	94	31	90	†1	95	16	80	†15	71	1	52	26
Plainfield.....	59	†18	63	15	60	25	94	27	80	22	90	14	92	31	88	1	91	†9	78	15	72	1	58	26
Somerville.....	58	19	65	15	59	25	93	27	80	22	90	14	94	31	90	1	93	9	81	15	72	1	58	26
South Orange.....	58	19	62	15	58	25	90	27	79	11	89	14	90	31	86	†1	89	9	76	15	68	1	57	18
New York, N. Y.....	57	19	60	15	55	25	91	27	76	22	89	14	92	31	87	16	90	9	77	15	68	1	55	18
<i>The Southern Interior.</i>																								
Bridgeton.....	60	7	67	23	61	25	93	25	88	22	91	15	95	17	98	1	94	†9	80	†13	70	†1	58	†25
Burlington.....	60	18	68	15	60	25	88	25	†77	8	91	15	92	†19	95	1	94	†9	80	15	72	1	60	†25
Clayton.....	59	†6	68	†15	61	25	94	27	86	22	90	15	94	†17	98	1	94	†14	82	15	74	1	60	25
Haddonfield.....	60	18	72	15	60	25	93	27	81	22	89	†14	92	17	96	1	92	†9	80	14	72	1	62	25
Hightstown.....	60	19	66	15	59	25	93	27	81	22	91	15	93	31	93	1	94	14	81	13	72	1	60	25
Imlaystown.....	60	19	71	15	61	25	93	27	82	22	92	14	90	†17	92	1	94	14	80	†13	72	1	57	18
Indian Mills.....	60	18	75	15	61	25	95	27	86	22	92	14	94	17	95	1	95	14	81	†15	75	1	62	25
Lakewood.....	58	†18	66	15	59	25	93	27	85	22	91	14	92	31	90	2	90	†9	78	15	71	1	58	18
Moorestown.....	60	†7	70	15	61	25	93	27	84	22	89	†15	90	†17	94	1	92	14	80	13	72	1	64	26
Trenton.....	60	18	67	15	57	25	93	27	79	22	89	15	92	30	94	1	91	9	79	15	69	1	60	25
Tuckerton.....	60	7			62	25	92	25	82	8	88	†14	98	17	96	16	95	17	80	15	74	1	53	†18
Vineland.....	60	6	66	15	60	25	93	27	86	22	91	14	93	17	95	1	93	9	81	15	74	1	58	†25
Woodbine.....	58	†6	65	23	58	25	89	27	88	23	88	†14	92	†17	96	1	92	9	78	15	72	2	57	†18
Philadelphia, Pa.....	61	18	67	15	58	25	93	27	81	22	89	15	93	17	96	1	92	9	79	21	70	2	60	25
<i>The Sea Coast.</i>																								
Asbury Park.....	56	7	55	6	60	25	85	27	78	22	83	12	92	31	88	1	91	17	74	21	73	1	57	18
Atlantic City.....	59	7	55	12	54	25	85	27	79	23	80	14	93	31	89	16	92	9	73	27	72	2	55	29
Cape May City.....	58	7	54	12	57	25	83	27	79	23	85	14	92	31	87	4	92	9	76	15	73	2	54	29
Long Branch.....	58	†7	55	15	63	25	86	25	77	13	87	12	94	31	91	16	96	9	80	21	74	1	57	18
Sandy Hook.....	56	19	58	15	57	25	89	27	77	22	85	12	91	31	88	16	92	9	77	15	67	1	55	18

† On other dates also.

Letters of alphabet denote number of days missing.

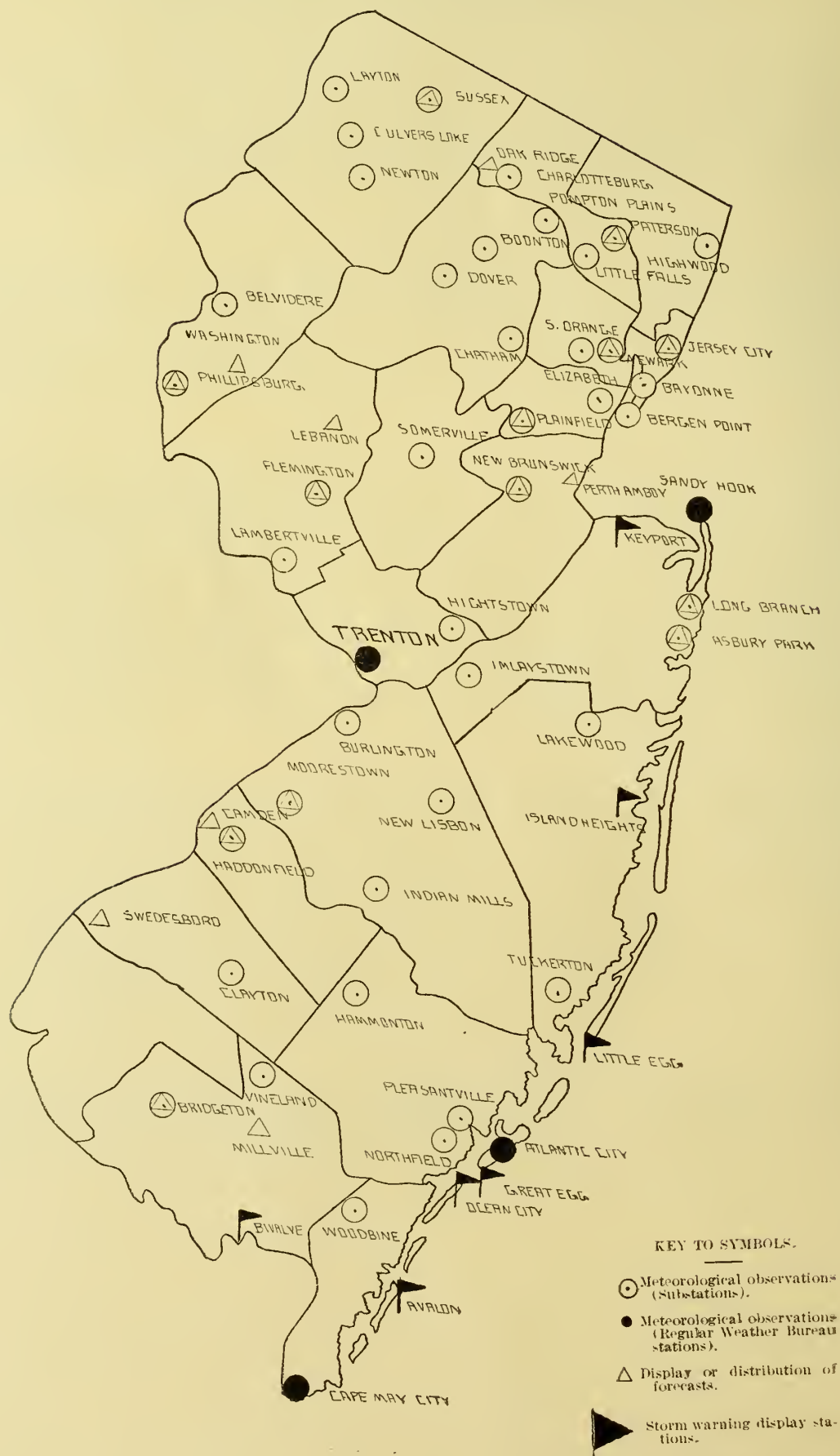
Monthly Minimum Temperatures for the Year 1915, with Dates.

STATIONS.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.	
	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.
<i>The Highlands and Killbuck Valley.</i>																								
Delvidere.....	8	30	12	10	17	4	25	5	33	2	42	2	54	†6	47	19	37	23	27	25	20	18	13	12
Charlotteburg.....	4	30	5	5	14	†4	21	5	30	16	37	1	44	7	41	27	30	23	23	25	18	25	3	22
Delaware Lake.....	5	30	2	10	6	4	20	†3	30	27	36	3	49	7	43	27	32	23	24	11	16	18	4	31
Overton.....	6	30	10	10	15	4	24	5	35	†16	41	1	49	10	46	27	35	23	26	25	22	†23	9	22
Wayton.....					15	†4	22	5	32	†15	41	†5	47	10	42	19	32	29	24	25	18	18	4	†22
Newton.....	6	30			11	4	25	5																
Phillipsburg.....	9	30	12	10	18	†4	28	5	38	27	45	3	53	10	51	†18	38	23	29	25	24	18	15	12
Possex.....	5	30	10	10	16	4	23	2	33	16	37	1	50	10	45	†18	35	†23	27	11	19	18	7	22
<i>The Red Sandstone Plain.</i>																								
Wayone.....	11	30	13	10	19	4	29	3	41	27	47	3	57	25	54	†27	43	30	35	25	27	23	18	†12
Weygen Point.....	10	30	12	10	18	4	27	5	40	†27	46	3	55	†9	50	18	40	23	32	24	25	23	17	31
Winton.....	9	30	10	5	18	†4	24	2	34	16	42	1	49	25	46	27	35	†23	28	†11	18	18	10	12
Elizabeth.....	10	30	13	10	18	4	23	5	33	27	43	1	52	25	49	†18	37	†23	28	25	22	†18	15	†12
Levinington.....	10	30	14	10	19	4	27	5	39	16	45	1	52	25	50	18	39	†23	30	25	23	23	14	†22
Highwood.....	9	30	11	5	17	4	21	5	36	†15	37	1	50	25	47	18	36	30	27	25	19	18	10	12
Jersey City.....	12	30	14	10	19	4	30	†3	41	27	48	3	58	9	54	18	45	28	36	25	29	†18	19	31
Lambertville.....	13	30	16	†5	20	4	30	5	41	27	47	†1	56	25	53	18	42	30	34	25	27	†18	18	†12
Little Falls.....	9	30	11	10	15	4	25	†2	35	27	43	1	50	10	47	19	36	30	30	†11	22	18	15	12
Newark.....	9	30	13	10	19	4	28	3	41	27	46	3	57	25	54	†18	45	†23	35	25	29	†18	17	31
New Brunswick.....	10	30	14	10	18	4	29	†3	40	20	46	3	53	25	50	18	39	23	30	25	22	23	14	13
Paterson.....	11	30	14	10	19	4	29	†3	39	27	46	3	56	†6	52	18	42	23	33	25	26	18	17	31
Plainfield.....	10	30	13	10	18	4	30	2	39	†19	44	1	53	†10	48	18	38	23	29	25	21	23	17	12
Quincyville.....	9	30	13	10	17	4	22	5	35	16	41	1	50	†7	47	18	37	†23	27	25	17	23	12	12
South Orange.....	10	30	13	10	18	4	28	4	38	27	46	3	55	25	52	18	41	23	33	†11	27	†18	18	†12
New York, N. Y.....	10	30	13	10	18	3	28	3	41	27	46	3	59	9	55	18	44	28	37	25	30	23	17	31
<i>The Southern Interior.</i>																								
Ridgeway.....	14	30	13	10	20	4	21	3	41	27	45	1	53	9	50	18	39	28	31	†24	22	23	20	†5
Richington.....	12	30	13	10	20	4	25	5	40	27	45	1	55	25	52	†18	41	30	34	25	24	23	17	15
Wayton.....	9	30	13	10	20	4	23	5	38	20	41	1	51	25	48	18	32	23	29	25	20	23	18	†5
Waddonfield.....	11	30	13	10	19	4	26	5	38	27	44	1	52	25	50	18	38	23	30	25	22	23	15	15
Rightstown.....	11	30	13	10	18	4	26	5	37	27	43	1	50	25	49	18	36	30	28	25	21	†18	16	†12
Waytown.....	10	30	10	10	16	30	23	2	39	20	46	25	52	†7	48	†18	35	23	27	25	18	23	12	15
Indian Mills.....	10	30	11	10	18	4	25	2	35	20	37	1	47	25	47	18	34	23	27	25	17	23	14	27
Woodswood.....	9	22	13	†10	18	4	20	5	34	16	41	1	46	25	48	†18	34	29	29	†11	18	†18	14	27
Boerstown.....	12	30	14	10	20	†4	27	5	40	27	46	1	54	25	50	18	40	23	30	25	23	†18	17	12
Wenton.....	12	30	14	10	20	4	29	3	42	27	46	3	57	25	53	18	43	29	35	25	27	30	18	15
Wickerton.....	13	5			17	1	22	5	38	†2	38	1	51	10	47	18	36	†28	30	24	18	23	16	27
Wineand.....	13	30	11	10	19	27	23	5	40	†20	42	1	54	9	50	†18	36	28	29	25	22	†18	16	5
Woodbine.....	12	1	12	10	20	†1	25	5	†41	27	39	1	53	26	50	18	37	29	31	24	21	18	17	†5
Philadelphia, Pa.....	14	30	16	10	22	4	30	3	44	27	48	3	61	25	58	18	47	28	40	25	32	30	20	15
<i>The Sea Coast.</i>																								
Asbury Park.....	10	30	13	10	19	4	29	†3	43	†2	48	1	57	9	53	18	40	28	33	24	25	23	18	15
Atlantic City.....	15	30	15	10	20	4	30	3	44	27	51	1	58	9	54	18	41	28	35	24	27	30	20	11
Maple May City.....	16	30	18	10	24	4	31	3	43	27	50	1	60	23	55	18	45	23	40	24	29	23	23	21
Long Branch.....	10	30	12	10	18	†3	27	3	42	†19	46	1	57	9	52	19	40	28	33	24	26	†18	19	†15
Sandy Hook.....	14	30	16	10	22	4	31	3	46	1	48	3	61	26	58	18	48	28	41	24	31	23	20	15

† On other dates also.

Letters of alphabet denote number of days missing.

OBSERVATION AND FORECAST DISPLAY STATIONS.



TOTAL PRECIPITATION FOR THE YEAR 1965



REGULAR, SPECIAL, AND COOPERATIVE STATIONS AND OBSERVERS.*

Stations.	Observers.	Stations.	Observers.	Stations.	Observers.
Asbury Park.....	Wilbur H. Pancoast.	Hammonton.....	Leon Dunbar.	Phillipsburg.....	D. Wilson Smith.
Atlantic City.....	U. S. Weather Bureau.	Hightstown.....	Charles J. Bates.	Plainfield.....	John Neagle.
Bayonne.....	Erskine R. Eadie.	Highwood.....	H. E. Bullock.	Pleasantville.....	Lincoln Van Gilder.
Belvidere.....	Samuel J. Hixson.	Imlaystown.....	James M. Armstrong.	Pompton Plains.....	M. S. Taylor.
Bergen Point.....	Wm. H. Mitchell. D. D. S.	Indian Mills.....	Samuel K. Pearson, Jr.	Sandy Hook.....	U. S. Weather Bureau.
Boonton.....	J. W. Demmers.	Jersey City.....	Richard W. Holman.	Somerville.....	A. A. Macdonald.
Bridgeton.....	Henry A. Jorden.	Lakewood.....	Samuel W. Cochran.	South Orange.....	Wm. J. Chandler, M. D.
Burlington.....	D. S. B. McCoy.	Lambertville.....	A. M. Depue.	Sussex.....	George Dymock.
Cape May City.....	U. S. Weather Bureau.	Layton.....	Montclair Water Co.	Trenton.....	U. S. Weather Bureau.
Charlotteburg.....	George S. Briggs.	Little Falls.....	Wm. D. Martin, Jr.	Tuckerton.....	Frank R. Austin.
Chatham.....	Miss M. A. Butler.	Long Branch.....	Geo. L. Gillingham.	Vineland.....	E. V. C. Hendricks.
Clayton.....	George L. Wilson.	Moorestown.....	William Wiener.	Woodbine.....	Baron de Hirsch Agric'l School. *
Culvers Lake.....	Brice E. Riker.	New Brunswick.....	N. J. Experiment Station.		
Dover.....	Wm. C. Harris.	Newtown.....			
Elizabeth.....	L. B. Bonnett.	Northfield.....	Wm. L. Flick.		
Flemington.....	Hiram E. Deats.	Paterson.....	Heber A. Probert.		
Haddonfield.....	Charles F. Richardson.				

* At the end of the year, 1915.

FORECASTS, WARNINGS, AND DISTRIBUTING CENTERS.

WEATHER AND TEMPERATURE FLAGS.		SPECIAL WARNINGS.	
Stations	Displaymen	Place	Distributor
Asbury Park.....	Asbury Park Trust Co.	Atlantic City.....	U. S. Weather Bureau
do.....	Asbury Park Publicity Bureau	Bordentown.....	Delaware & Atlantic Tel. & Tel. C
Atlantic City.....	Manager, Preston Building	Bridgeton.....	Henry A. Jorden
do. (in summer only).....	Seaside Yacht Club	Cape May City.....	U. S. Weather Bureau
Bridgeton.....	Henry A. Jorden	Freehold.....	J. A. Yan
Cape May City.....	U. S. Weather Bureau	Jersey City.....	Union Trust Co. of New Jersey
Island Heights (in summer only).....	Island Heights Yacht Club	Long Branch.....	William D. Martin
Jersey City.....	Union Trust Co. of New Jersey	Millville.....	Delaware & Atlantic Tel. & Tel. C
Long Branch (cold wave warnings).....	William D. Martin	Mount Holly.....	do.
Newark.....	Central High School	Newark.....	William Wien
do.....	State Normal School	Paterson.....	Public Library
New Brunswick.....	National Bank of New Jersey	Perth Amboy.....	do.
Plainfield.....	John Neagle	Plainfield.....	John Neag
Princeton.....	First National Bank	Salem.....	Delaware & Atlantic Tel. & Tel. C
Trenton (cold wave warnings).....	U. S. Weather Bureau	Sandy Hook.....	U. S. Weather Bureau
		Trenton.....	do.

FORECAST DISTRIBUTING CENTERS.

Figures following the name of town indicate the number of forecast cards distributed daily, by mail, to points in New Jersey.

Atlantic City—226.....	U. S. Weather Bureau
Cape May City—52.....	do.
Long Branch—190.....	William D. Martin, jr.
Newark—174.....	William Wiener
New York, N. Y.—407.....	U. S. Weather Bureau
Oak Ridge—R. F. D. Service—110.....	Postmaster
Philadelphia, Pa.—173.....	U. S. Weather Bureau
Phillipsburg—91.....	Postmaster
Plainfield—104.....	John Neagle
Sandy Hook—20.....	U. S. Weather Bureau
Trenton—349.....	do.
Washington, N. J.—R. F. D. Service—60.....	Postmaster

FORECASTS BY TELEPHONE.

Forecasts are available each business day after 10:30 a. m. to all telephone stations within the State, in most instances without payment of toll. Special forecast distributors by telephone are:

Flemington.....	Hiram E. Deats
Hammonton.....	Hammonton Tel. & Tel. Co.
Lebanon.....	N. J. Telephone Co.
Paterson.....	Public Library
Perth Amboy.....	do.
Sussex.....	Farmers' Union Tel. Co.
Swedesboro.....	Peoples Rural Tel. Co.

WARNINGS OF FROSTS IN CRANBERRY MARSHES.

Place	Distributor
Belle Plain.....	E. H. Dur
Bordentown.....	S. F. Garriss
Cream Ridge.....	Isaac Harris
Hammonton.....	A. J. Rio
Laurel Springs.....	E. Z. Collin
Mays Landing.....	C. D. Makepea
Medford.....	Evans & Wi
New Lisbon.....	J. J. Whi
Pemberton.....	Theo. H. Bu
Toms River.....	Geo. H. Holm
Vincentown.....	Ethelbert Hain

STORM WARNING DISPLAY STATIONS.

Atlantic City	Great Egg	Long Branch
Avalon	Island Heights	Ocean City
Bivalve	Keyport	Sandy Hook
Cape May Point	Little Egg	

105
VJ

Stack

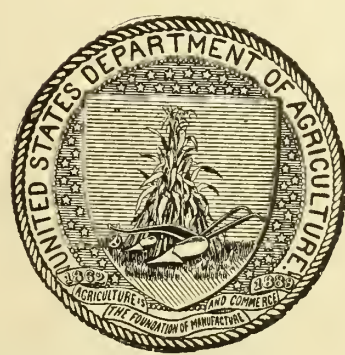
U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU
CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

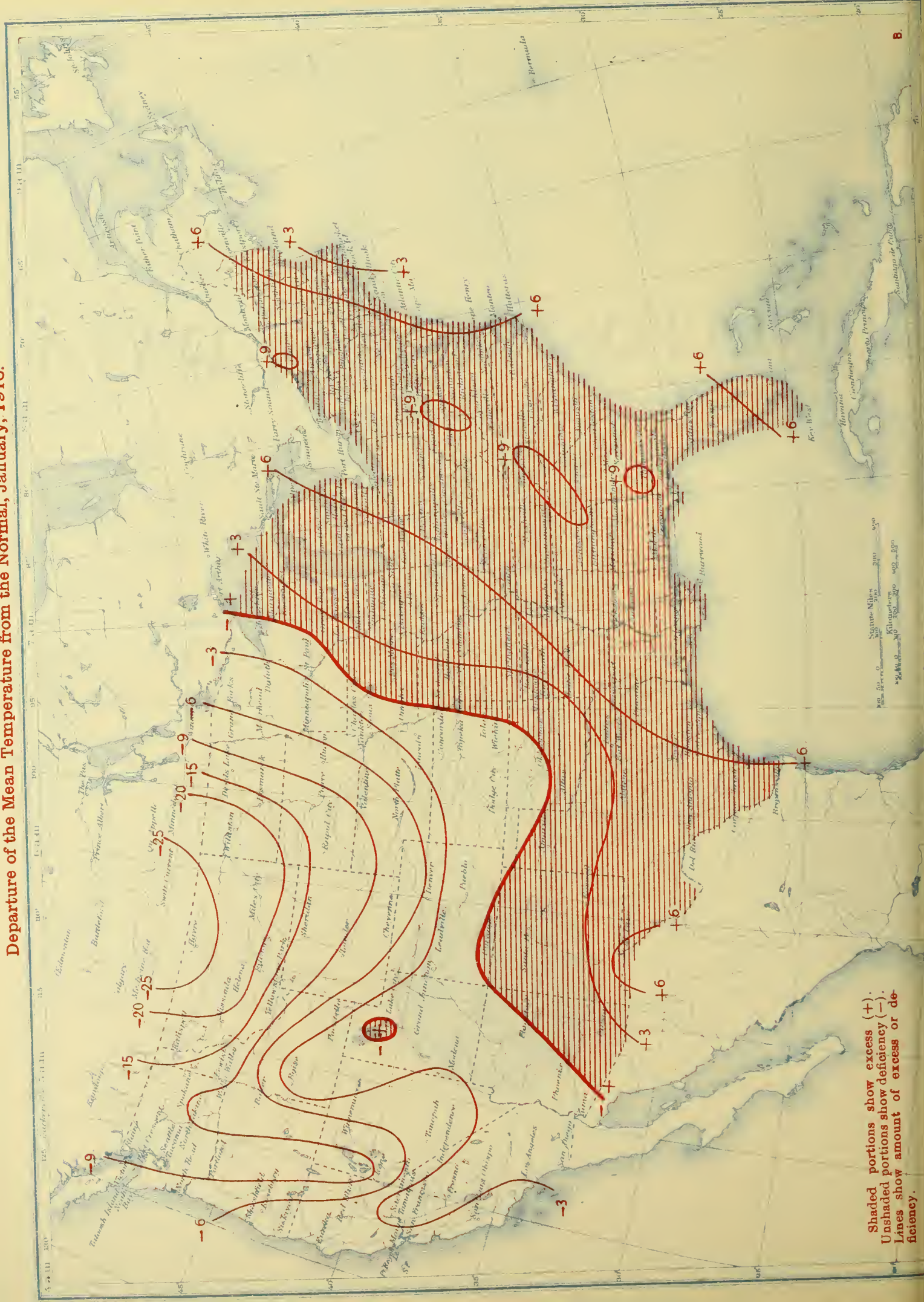
JANUARY, 1916.

BY
G. HAROLD NOYES
SECTION DIRECTOR



TRENTON, N. J.
WEATHER BUREAU OFFICE
FEBRUARY 26, 1916.

Departure of the Mean Temperature from the Normal, January, 1916.



Shaded portions show excess (+).
Unshaded portions show deficiency (-).
Lines show amount of excess or deficiency.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Section Director.

VOL. XXIX. TRENTON, N. J., JANUARY, 1916. No. 1.

GENERAL SUMMARY.

In 1889, 1890, 1906 and 1913 the months of January have been somewhat warmer than January, 1916, now under review, so that this is one of five unusually warm Januarys in 32 years. In some of the northeastern districts of the State, the highest readings on the 27th, above 70°, were record breakers, and daily mean temperatures on that date were as much as 30° above normal. This warmth, in connection with the driest January ever known in New Jersey, and hardly enough snow to consider, made the month remarkable; many out-of-door occupations usually suspended at this season were carried on satisfactorily. But many economic gains of this nature were measurably offset by the probability of failure of a natural ice harvest, at least in nearly all except extreme northern districts. January, 1896, was the only other mid-winter month any where near approaching this for absence of precipitation. The temperature was below normal on but eight days of the month, viz., the 7th, 8th, 9th, 14th, 15th, 17th, 18th, and 19th.

The irregularities of snowfall were unusual in that some two or three times as much snow fell in the southern as in the northern half of the State. Days on which precipitation occurred were the 2d, 5th, 10th to 13th, 16th, 17th, 20th, 22d, 26th, 30th, and 31st, and in addition in the southern half, 6th, 7th, 21st, and 23d. There was a snow storm of about two inches in the southern part of the State on the 7th, and a light fall on the 10th in the northern half, and a general fall, though light, on the 16th-17th. A region stretching from Hunterdon into Morris county was practically without snow during the month, and the section of greatest snowfall was in the southeastern counties.

The mild weather has probably had but little unfavorable effect on grass and grain, as there was not much alternate freezing and thawing, the mechanical action of which is injurious. A concomitant factor of the mild weather was the prevailing southwesterly wind. In January the winds usually prevail from a northerly quadrant, with an occasional northeast storm followed by a cold wave from the northwest, and although in this month there were moderate cold waves on the 8th, 14th, and 17th, their effects were speedily obliterated by the warm waves immediately following, and there was no typical northeast storm during the month.

At Phillipsburg the mean stage of the Delaware River for the 25 days, when it was not frozen, was 5.3 feet, the highest being 11.5 feet on the 28th. At Trenton, the mean stage was 3.4 feet, which was 1.0 foot below normal; the highest being 5.5 feet on the 30th.

TEMPERATURE.

The monthly mean temperature of the State, as deduced from observations of 37 stations, was 35.1°, which was 5.2° above normal. The highest temperature was 74° at Long Branch on the 27th, and the lowest, 8° below zero at Culvers Lake on the 15th. The highest monthly mean temperature was 39.0° at Woodbine, and the lowest monthly mean, 31.1° at Boonton. The greatest daily range of temperature was 39°, when it ranged

from 26° to 65° at Indian Mills on the 26th. The only section of the State with a mean temperature below freezing was in Sussex and portions of Morris and Passaic counties. Departures above normal in temperature were about equally divided throughout the State.

PRECIPITATION.

The average precipitation of the State, as deduced from observations of 42 stations, was 1.50 inches, which was 2.28 inches below normal. A small section of the southeastern counties, but back from the coast, had slightly over 2 inches, the greatest being 2.96 inches at Tuckerton, while the least was 0.92 inch at Jersey City. The average depth of snowfall for the State was 1.9 inches, which was 6.8 inches below normal with considerably more in the southern half and along the coast than elsewhere. The greatest snowfall was 6.5 inches at Tuckerton, and the least, none, at Dover. The greatest precipitation in 24 consecutive hours was 0.73 inch at Tuckerton on the 10th. The average number of days throughout the State on which 0.01 inch or more precipitation fell was 11, which was normal.

WIND.

The prevailing wind direction for the month was from the southwest, with an approximate velocity of 14 miles per hour. The highest velocity for five consecutive minutes was 63 miles per hour from the northwest at Long Branch on the 3d. The winds were also high on the 5th, 6th, 10th, 14th, and 17th.

SUNSHINE AND CLOUDINESS.

The average number of clear days throughout the State was 11; partly cloudy, 8; cloudy, 12; which was 1 less clear, and 1 more partly cloudy, than normal. About half the possible amount of sunshine prevailed, which was near normal.

MISCELLANEOUS.

Atmospheric pressure, reduced to sea level, was 30.25 inches, which was 0.14 inch above normal. Highest readings occurred mostly on the 20th, and the lowest on the 5th. Dense fog prevailed very generally over the State on the 2d, 13th, 25th, 26th, 30th, and 31st and locally on other dates. The principal dates of sleet were the 12th, 20th, and 30th. Lunar halos were observed on the 9th, 13th, 15th, 18th, and 19th. Solar halos were observed on the 4th, 8th, 9th, and 15th.

COMPARATIVE DATA FOR JANUARY.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more prec.
1885.....	30.8	67	0	4.08	5.41	3.33	.....	.....	.....	.....
1886.....	27.3	60	-10	4.47	5.59	3.08	.....	.....	.....	.....
1887.....	28.4	67	-6	3.86	6.65	2.00	.....	.....	12	10
1888.....	25.4	59	-12	4.77	6.74	2.80	.....	.....	12	9
1889.....	36.2	60	8	5.68	8.78	3.84	.....	.....	9	9
1890.....	41.3	78	12	2.29	3.22	1.05	.....	.....	11	10
1891.....	34.2	59	10	6.57	10.55	4.41	10	11	10	10
1892.....	29.9	67	-6	5.13	7.05	2.50	10	9	12	10
1893.....	21.6	54	-21	3.04	4.56	1.87	10	10	11	9
1894.....	34.2	61	-4	2.34	3.80	1.18	10	8	13	11
1895.....	28.1	64	-4	4.66	5.80	2.48	10	10	11	11
1896.....	28.6	61	-7	1.66	2.87	0.68	12	10	9	5
1897.....	29.0	64	-6	2.80	4.21	1.70	11	8	12	9
1898.....	32.6	64	-10	4.20	5.90	2.79	9	11	11	11
1899.....	30.1	60	-21	4.01	5.73	2.40	13	8	10	11
1900.....	32.4	64	-5	3.85	5.50	2.37	11	11	9	10
1901.....	30.4	63	-6	2.52	4.00	1.35	11	11	9	9
1902.....	28.4	58	-5	3.28	4.35	2.52	12	9	10	10
1903.....	30.4	57	-5	3.90	5.04	2.31	10	10	11	10
1904.....	23.3	58	-34	3.09	4.67	1.34	13	7	11	10
1905.....	27.0	60	-16	4.18	7.13	2.68	12	9	10	9
1906.....	36.5	74	-5	2.85	3.86	2.08	11	9	11	11
1907.....	31.8	71	-19	3.50	5.80	1.93	8	9	14	14
1908.....	31.8	60	-6	3.74	5.22	2.29	12	11	8	9
1909.....	33.2	69	-12	3.18	4.13	3.18	8	9	14	12
1910.....	29.7	54	-15	5.04	6.65	3.66	8	8	15	15
1911.....	33.5	63	0	3.44	5.34	1.97	10	7	14	14
1912.....	22.3	58	-32	2.82	4.62	1.73	8	12	11	13
1913.....	35.9	68	10	3.58	4.71	2.63	11	7	13	14
1914.....	31.9	73	-18	3.79	6.15	1.95	9	8	14	9
1915.....	33.5	61	-5	6.55	8.92	4.40	11	6	14	12
1916.....	35.1	74	-8	1.50	2.96	0.92	11	8	12	11

Climatological data for January, 1916.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	(greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation in. or more.	Clear.	Pt. cloudy.			Cloudy.
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	25	33.3	+5.8	64	27	6	15†	26	1.64	-2.11	0.39	2.0	10	13	3	15	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	24	31.6	+4.5	66	27	2	15	22	1.02	-3.34	0.36	1.0	8	18	8	5	sw.	George S. Briggs.
Culvers Lake††.....	Sussex.....	848	15	.....	.....	.....	.....	.....	.....	.....	1.39	-1.79	0.35	4.2	12	16	4	11	nw.	Brice E. Riker.
Dover.....	Morris.....	600	32	31.4	+4.8	66	27	3	15	30	1.78	-2.71	0.69	0	11	.....	.....	.....	William C. Harris.	
Layton.....	Sussex.....	480	16	31.4	+7.4	65	27	-1	15	26	1.50	-2.00	0.44	0.3	13	15	5	11	s.	A. M. Depue.
Newton.....	Sussex.....	678	35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	D. Wilson Smith.
Phillipsburg.....	Warren.....	363	34	34.3	+6.4	68	27	7	15†	30	1.40	-2.25	0.31	1.8	12	15	2	14	s.	George Dymock.
Sussex.....	Sussex.....	442	26	31.4	+5.3	64	27†	3	9†	24	.....	.....	.....	2.0	.....	.....	.....	.....	.....	.....
Means and extremes.....		.....	.....	32.2	+5.7	68	27	-8	15	30	1.46	-2.37	0.69	1.6	11	14	5	12	sw.	.....
<i>The Red Sandstone Plain.</i>																				
Bayonne.....	Hudson.....	50	26	34.9	+4.8	68	27	7	15	30	1.29	-2.84	0.31	T.	11	15	3	13	n.	Erskine R. Eadie.
Bergen Point††.....	Hudson.....	37	19	34.8	+4.6	70	27	6	15	30	1.18	-3.24	0.31	T.	6	5	16	10	nw.	William H. Mitchell.
Boonton.....	Morris.....	400	26	31.1	.....	63	27	4	9	36	1.32	-2.88	0.32	0.3	12	18	3	10	sw.	J. W. Demmers.
Chatham.....	Morris.....	234	14	.....	.....	.....	.....	.....	.....	.....	1.39	-2.50	0.30	T	11	17	4	10	w.	Miss M. A. Butler.
Elizabeth.....	Union.....	45	37	35.3	+5.2	72	27	6	15	30	1.34	-2.76	0.48	0.5	11	10	11	10	sw.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	28	34.6	+5.0	70	27	7	18	29	1.53	-1.94	0.36	T	13	13	5	13	sw.	Hiram E. Deats.
Highwood.....	Bergen.....	90	27	33.2	+4.3	67	27	6	15	28	1.23	-2.84	0.06	0.3	8	6	13	12	sw.	Charles J. Bates.
Jersey City.....	Hudson.....	10	17	35.6	+4.8	68	27	9	15	29	0.92	-2.94	0.25	0.4	10	11	8	12	sw.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	29	37.3	+6.9	66	27†	8	18	29	1.49	-2.55	0.56	T.	9	8	13	10	nw.	Samuel W. Cochran.
Little Falls.....	Passaic.....	180	21	.....	.....	66	27	.....	.....	.....	1.14	-3.08	0.29	T.	8	.....	.....	.....	w.	Montclair Water Co.
Newark.....	Essex.....	159	74	33.6	+4.0	68	27	6	15	31	1.14	-2.62	0.29	0.9	11	10	7	14	nw.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	110	63	35.4	+4.9	73	27	6	18	31	1.48	-2.33	0.33	0.5	11	16	8	7	sw.	N. J. Experiment Station.
Paterson.....	Passaic.....	80	45	35.4	+6.0	69	27	7	15	29	1.25	-2.81	0.24	0.7	9	6	16	9	sw.	Heber A. Probert.
Plainfield.....	Union.....	100	30	34.5	+5.1	70	27	7	15†	29	1.33	-2.56	0.46	0.7	14	10	11	10	sw.	John Neagle.
Pompton Plains.....	Morris.....	195	14	.....	.....	.....	.....	.....	.....	.....	1.26	-3.13	0.32	2.0	9	.....	.....	.....	.....	M. S. Taylor
Somerville.....	Somerset.....	60	34	33.4	+4.2	70	27	5	18	29	1.01	-2.47	.....	0.2	12	8	12	11	sw.	A. A. Macdonald.
South Orange.....	Essex.....	200	46	34.0	+5.3	67	27	7	15	27	1.21	-2.93	0.30	0.2	10	8	12	11	n.	Dr. W. J. Chandler.
New York, N. Y.....	.....	365	46	35.4	+5.2	66	27	7	15	31	1.08	-2.71	0.28	0.7	11	7	10	14	sw.	U. S. Weather Bureau.
Means and extremes.....		.....	.....	34.5	+5.0	73	27	4	9	36	1.27	-2.71	0.56	0.4	10	11	9	11	sw.	.....
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	35	37.7	+4.7	73	27	8	18	30	1.96	-1.78	0.60	4.0	9	9	8	14	w.	Henry A. Jorden.
Burlington.....	Burlington.....	12	30	36.9	.....	70	27	7	18	28	1.58	-1.96	0.35	1.8	12	16	5	10	nw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	24	36.9	+6.0	70	27	2	18	36	1.97	-1.79	0.50	4.0	11	14	8	9	.....	George L. Wilson.
Haddonfield.....	Camden.....	75	29	36.4	+6.4	71	27	4	18	33	1.90	-1.49	0.44	3.7	15	6	12	13	sw.	Prof. Chas. F. Richardson.
Hammonton.....	Atlantic.....	103	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hightstown.....	Mercer.....	140	24	35.6 ^a	+4.7	70	27	4	18	32	1.38	-2.31	0.48	0.5	9	9	8	14	nw.	Leon Dunbar.
Indiantown.....	Monmouth.....	185	28	34.8 ^b	+3.1	73	27	-2	18	37 ^c	1.60	-1.85	0.50	2.0	7	11	7	13	sw.	H. E. Bullock.
Indian Mills.....	Burlington.....	76	27	37.0	+5.6	72	27	0	18	39	2.07	-1.63	0.45	4.5	13	10	9	12	sw.	James M. Armstrong.
Lakewood.....	Ocean.....	54	13	36.2	+4.1	71	27	0	19	38	1.62	-2.16	0.45	3.5	10	7	8	16	.....	R. W. Holman.
Moorestown.....	Burlington.....	75	54	37.4	+7.3	71	27	5	18	32	1.57	-1.91	0.40	4.5	12	9	13	9	nw.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	9	.....	.....	.....	.....	.....	.....	.....	1.93	.....	0.44	3.6	11	.....	.....	.....	.....	William L. Fliek.
Pleasantville.....	Atlantic.....	26	18	.....	.....	.....	.....	.....	.....	.....	1.67	-1.73	0.43	.....	12	16	3	12	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	45	35.5	+5.0	68	27	7	18	50	1.26	-1.91	0.38	0.9	13	6	9	16	sw.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	23	36.6	+4.9	72	27	4	9	33	2.96	-0.70	0.73	6.5	10	6	13	12	.....	Frank R. Austin.
Vineland††.....	Cumberland.....	87	48	38.0 ^a	+6.0	71	27†	5	9†	32	2.13	-1.53	0.67	3.5	13	8	4	19	sw.	E. V. C. Hendricks.
Woodbine.....	Cape May.....	43	25	39.0 ^b	+6.6	68	28	6	15†	31	2.37	-1.28	0.51	4.0	11	13	5	13	sw.	Baron de Hirsch Agr. Sch.
Philadelphia, Pa.....	.....	117	46	38.2	+6.4	69	27	9	18	28	1.50	-1.91	0.36	2.5	15	7	11	13	sw.	U. S. Weather Bureau.
Means and extremes.....		.....	.....	36.7	+5.3	73	27	-2	18	39	1.86	-1.71	0.73	3.3	11	10	3	13	sw.	.....
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	27	36.1	+4.7	72	27	6	18	32	1.21	-2.53	0.45	4.5	10	13	8	10	w.	Wilbur H. Pancoast.
Atlantic City.....	Atlantic.....	16	43	37.0	+4.5	68	28	10	15	26	2.00	-1.40	0.47	3.7	12	7	3	21	sw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	32	37.4	+3.3	65	28	12	15	29	1.62	-1.75	0.37	4.6	15	6	12	13	s.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	9	35.7	.....	74	27	3	18	35	0.97	.....	0.29	0.8	9	10	8	13	w.	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	18	35.0	+5.3	63	27	10	18	25	1.14	-2.96	0.31	1.3	13	8	10	13	sw.	U. S. Weather Bureau.
Means and extremes.....		.....	.....	36.2	+4.4	74	27	3	18	35	1.39	-2.16	0.47	3.0	12	9	8	14	sw.	.....
For the State.....		.....	.....	35.1	+5.2	74	27	-8	15	39	1.50	-2.28	0.73	1.9	11	11	3	12	sw.	.....

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

* Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Vineland is South Vineland.

Daily precipitation for January, 1916.

Stations.	Day of month.																															Total.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>The Highlands and Killarney Valley.</i>																																	
Andover	*	.39			.06					.21		.21	.36		.05					.03		*					.11				.12		1.64
Flottenburg	T.	.15			T.					.20	.05		.36		T.					T.						.04				.17	.22	1.02	
Waters Lake	T.	.35	T.		.03					.22	.07	.14	.27		.02	T.				.04		.02	T.				.03			.17	.03	1.33	
Warton	.02	.44	T.		.08					.31	*	.69			*					.10		.02			.06		.01	T.		.20		1.77	
Warton					.03	.02				.14	.10	.11	.30		T.	.02				.03	T.	.02				.01	T.		.26	T.		1.50	
Warton	T.	.31			.04					.19		.21	.29		.03	.02				.02		.04	T.			.03	T.			.20	.02	1.40	
Warton	.08	.35			.06					.37		.10	.21		.02							.03				.04				\$	\$	\$	
<i>The Red Sandstone Plain.</i>																																	
Andover		.31	T.		.02					.23	.08	.23	.20		T.	.01						.02	T.		T.	.03				.13	.13	1.29	
Andover Point		.31								.22	.05	.27	.19		T.					T.		T.				T.				.14		1.18	
Andoverham		.31	.01		T.	.03				.03	.24	.18	.32	.02	T.	T.				T.		T.	.04			T.	.02			.06	.06	1.32	
Andoverham		.06	.23			.25				.30	.04	.22	.15		T.						.03						*	.07		.04		1.39	
Andoverham	T.	.32			.02	T.				*	.26	*	.48		T.	.05					.01		.02			T.				*	.18	1.34	
Andoverham	T.	.35			.07	.07				.18	.04	.08	.36		T.	T.				.01		.04			.09					.21	.03	1.53	
Andoverham	T.	.21	T.		.04					.16		.36	.20		T.	T.				T.		.05	T.		T.	.03				.18	T.	1.23	
Andoverham	T.	.12			.01					.25		.20	.11		T.	.03				T.		.03			.03			*	.14		0.92		
Andoverham	T.	.56			.03					.17		.08	.26		T.	T.				T.	.08	.04		.04			.04		.23			1.49	
Andoverham	T.	.26			T.					.23	.06	.21	.21		T.	T.				T.		.02		.03	T.				.12	T.		1.14	
Andoverham	T.	.27			.02					.27	.02	.13	.25		T.	.02	.02			T.		T.			.02	T.				.10	.02	1.14	
Andoverham	T.	.33			.03					.33	.10	.08	.26		T.	.01	.07			T.		T.		.06	T.					.18	.03	1.48	
Andoverham	T.	.24	T.		.03					.15	.13	.24	.23		T.	.03				T.		.03			T.	.02				.18		1.25	
Andoverham	.14	.32	T.		.02	.01				.22	.01	.05	.34		.06					.01		.02		.02		.02				.04	.07	1.33	
Andoverham	T.	.27			T.					T.	.32	.19	.28		T.					T.		*		.09			*	.06		.04	.10	1.26	
Andoverham		.25			.34					.19	.04	.09	.19		T.	.01				*		.02		.02		.02				.09	.02	1.01	
Andoverham	.05	.21			.01					.18	.07	.26	.24		T.	T.				T.		.02		T.		T.				.11	.02	1.21	
Andoverham	T.	.21	T.		.01					.24	.04	.20	.15		.03	.03				T.		T.				.03	T.	T.		.13	.01	1.08	
<i>The Southern Interior.</i>																																	
Andoverham	T.				.08	.20				.60		.11	.08		*	.20				.22		.22								.25		1.96	
Andoverham		.35		.03	.12		T.			.34		.07	.12		.09	.10				T.	.04	.08				T.	.03			.21	T.	1.58	
Andoverham		.32				.07				.50		.04	.04		.13	.11				.36		.03	.12							.25		1.97	
Andoverham	T.	.35	T.		.02	.08	.03			.44	.01	.07	.08	T.		.12	.18			.09		.15	T.			.01	T.			.25	.02	1.90	
Andoverham	*	.42								.48		.04	.09		.05								.08							.19	.03	1.38	
Andoverham		.40								.50		.10	.15		.10					T.		.15								.20		1.60	
Andoverham	T.	.42			.01	.06	.04			.45		.02	.04		.28	.09				T.	.18	T.	.19						.23	.06	2.07		
Andoverham	T.	.40			T.	.04	T.			.45	.03	T.	.04		.23	.11				T.	.15	T.	.15		T.				.15	.02	1.62		
Andoverham	T.	.36			T.	.07	.02			.40	.02	.04	.06		.06	.15				T.	.06		.09						.24	T.	1.57		
Andoverham	T.	.44			.02	.13				.43		.05	.03		.32	.06				.05		.10							.30		1.93		
Andoverham	T.	.43			.04	.14				.26		.04	.02		.23	.09				.06		.06	.03			T.			.27		1.67		
Andoverham	.10	.28	T.		.12					.33	.01	.03	.08	T.		.10				T.		.06		.01	T.		.01		.12	.01	1.26		
Andoverham	T.	.55			.32					.73		.10	.07		.42	.22				.18	.07		.30						.30		2.96		
Andoverham	.01	.67	T.		T.	.02	.15			.42	T.	.10	.03		.18	.08				.11	.01		.10		T.	T.			.25		2.13		
Andoverham	.02	.51	T.		T.	.05	.16			.33		.08	.10		.50					.05		.14							.43		2.37		
Andoverham	.12	.21	T.		.05	.03	.02			.36	.01	.05	.08		.16	.04				.06		.09			.01	T.			T.	.21	T.	1.50	
<i>The Sea Coast.</i>																																	
Andoverham	.03	.20	T.		.07	.01				.25	T.	.03	.02	T.		.45				T.		.07								.08		1.21	
Andoverham	.08	.37			T.	.03	.13			.40	T.	.06	.04		.43	.04				.06		.08								.28		2.00	
Andoverham	.04	.05			T.	.09	.28			.14	.03	.08	.05	.01	.37	.06				T.		.04							.01	.36	.01	1.62	
Andoverham	.29	.29			T.					.20	.01	.17	.17		.01	.01				T.		T.			.01				.10	T.	0.97		
Andoverham	.03	.25			.05					.28	.03	.08	.09	T.		.11	.01			T.		.04			T.	.01			.15	.01	1.14		

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24 hour period, midnight to midnight.

|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.

* Precipitation included in the next following measurement. **Precipitation for 24 hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

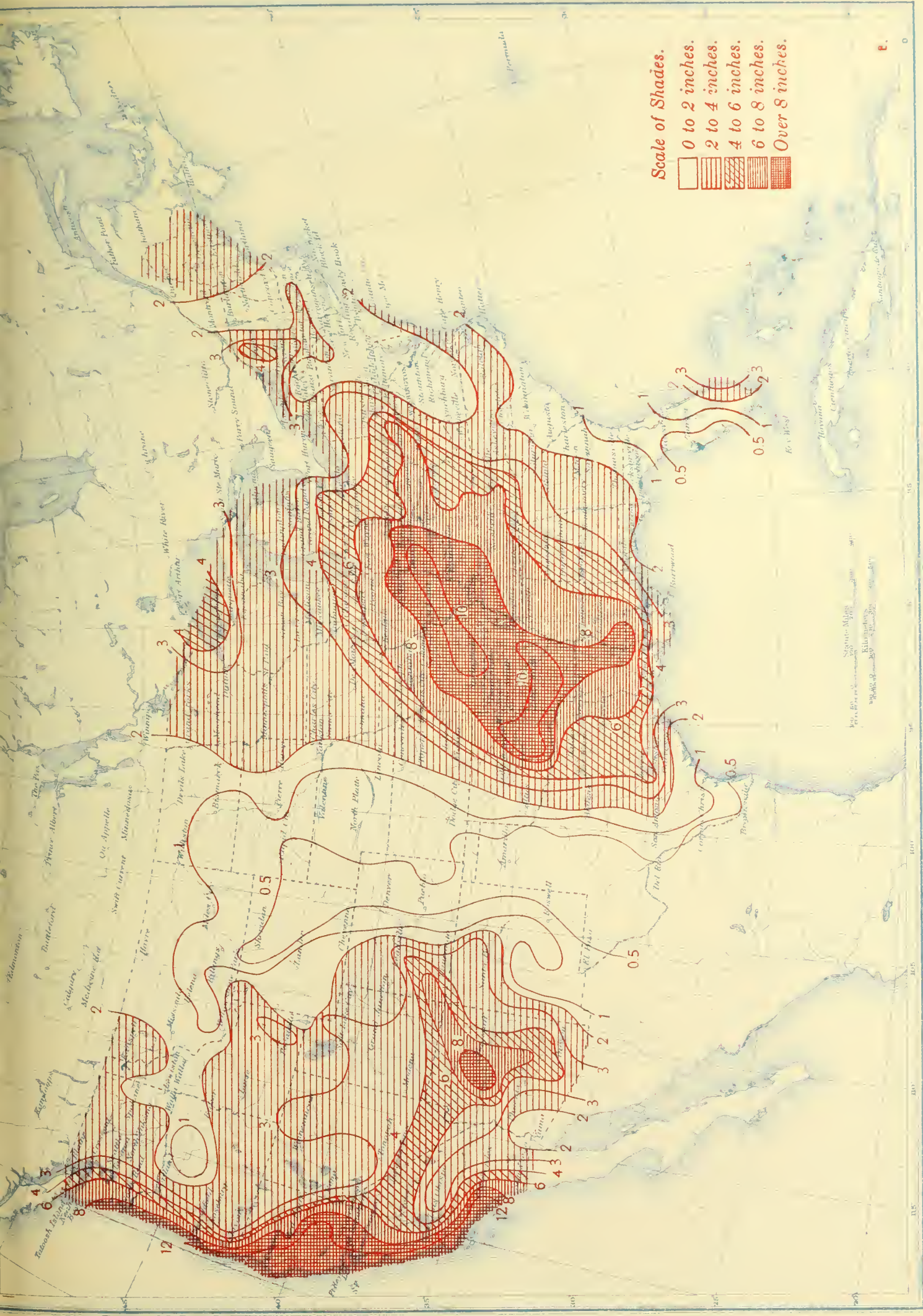
Stations.	Pressure.				Wind.			Moisture.		Sun- shine		
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.		Relative humidity, per cent. at 8 a. m.		Relative humidity, per cent. at 8 p. m.	
							Miles per hour.	Direction.				
Atlantic City.....	30.28	30.70	20	29.68	17	9	26	sw.	10	83	75	44
Liberty Park.....	30.29	30.66	19	29.76	2	10	30	nw.	3			
Long Beach.....	30.22	30.65	20	29.57	5							56
Long Branch.....	30.21	30.70	20	29.60	5	19	63	nw.	3	70	69	58
Long Beach.....							48	nw.	14	*71	+64	49
Long Beach.....	30.23	30.69	20	29.61	5	20	67	nw.	3	68	62	56
Long Beach.....	30.27	30.68	20	29.64	5	10	34	nw.	6	73	64	38
Long Beach.....	30.23	30.70	20	28.57	5	18	53	sw.	5	80	76	50
Long Beach.....	30.24	30.67	20	29.62	5	12	42	nw.	17	78	70	48

§ Two directions and dates.

* 7 a. m. † 9 p. m.

Daily temperature for January, 1916.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.	
<i>The Highlands and Kittatinny Valley.</i>																																	
Belvidere.....	Maximum ...	39	38	41	39	45	42	33	33	31	35	51	42	45	37	25	31	30	21	29	38	55	55	48	45	44	51	64	63	43	35	55	41.
	Minimum....	27	34	33	27	30	28	22	12	11	23	33	28	28	15	6	20	9	6	10	18	33	35	25	32	36	33	38	43	23	29	33	25.
Charlotteburg.....	Maximum....	42	38	37	36	43	49	28	25	29	35	44	43	46	41	22	34	32	17	28	34	60	53	54	42	46	54	66	62	46	33	53	41.
	Minimum....	17	30	28	20	29	25	17	4	6	17	33	27	26	15	2	17	7	4	8	11	33	30	34	19	26	39	46	46	19	25	31	22.
Dover.....	Maximum....	36	36	36	35	49	50	26	24	28	35	48	34	44	...	20	31	31	18	28	35	58	55	45	40	48	55	66	63	36	33	59	40.
	Minimum....	25	31	27	23	30	22	14	6	6	22	34	27	28	6	3	19	8	4	9	16	35	36	29	22	22	39	47	33	21	26	34	22.
Layton.....	Maximum....	36	36	39	39	43	48	28	28	28	35	48	40	46	36	21	33	32	17	28	35	57	53	52	44	50	58	65	64	44	32	55	41.
	Minimum....	20	31	29	22	30	24	15	5	4	20	32	25	25	10	-1	19	8	0	4	12	32	34	30	20	30	36	42	44	20	25	31	21.
Newton.....	Maximum....																																
	Minimum....																																
Phillipsburg.....	Maximum....	36	38	41	37	46	53	30	26	30	35	49	35	46	38	24	33	32	19	30	37	56	58	54	46	46	51	68	63	49	36	64	42.
	Minimum....	27	34	33	30	31	28	22	13	12	24	35	29	30	16	7	20	9	7	13	21	34	40	33	26	32	38	41	48	24	29	34	26.
Sussex.....	Maximum....	37	35	38	39	41	46	27	24	20	35	49	41	46	34	24	31	30	19	29	35	57	52	50	46	44	52	64	64	43	32	52	39.
	Minimum....	23	31	30	21	30	24	17	6	3	16	34	24	25	9	3	19	9	4	10	15	33	36	32	23	30	38	43	43	22	23	31	22.
<i>The Red Sandstone Plain.</i>																																	
Bayonne.....	Maximum....	39	38	39	38	55	57	30	24	28	39	52	42	47	36	25	35	28	21	29	41	58	61	52	41	55	55	68	64	40	35	63	43.
	Minimum....	28	34	32	27	32	27	22	13	12	26	36	30	33	16	7	22	12	9	13	22	36	39	33	27	29	40	41	40	23	29	34	26.
Bergen Point.....	Maximum....	41	36	40	38	54	52	30	26	28	38	53	44	48	34	25	37	32	22	31	43	60	61	57	45	56	56	70	66	42	36	64	44.
	Minimum....	26	26	30	25	30	26	20	12	11	23	34	30	32	14	6	21	11	7	11	20	36	35	31	24	29	47	46	42	24	29	34	25.
Boonton§§.....	Maximum....	36	40	39	38	51	38	29	27	31	42	50	37	47	23	25	33	17	20	29	41	56	57	42	44	48	54	63	62	40	38	59	40.
	Minimum....	20	29	30	24	25	35	20	5	4	7	29	29	28	23	5	7	12	6	8	10	20	35	33	20	25	31	39	44	22	24	23	21.
Elizabeth.....	Maximum....	39	37	41	40	50	57	32	28	31	36	52	47	49	42	25	35	33	22	31	41	60	64	58	46	54	55	72	67	53	35	64	44.
	Minimum....	24	34	30	26	30	29	24	12	9	22	35	29	31	17	6	22	12	7	9	18	35	34	35	24	27	34	44	52	25	28	34	25.
Flemington.....	Maximum....	36	37	40	40	45	55	30	30	31	35	48	43	45	38	25	35	33	24	32	39	56	59	53	50	49	53	70	64	48	35	64	43.
	Minimum....	26	34	32	29	30	27	25	12	13	24	35	30	31	16	8	21	11	7	8	18	34	36	32	25	28	35	42	47	25	30	35	26.
Highwood.....	Maximum....	36	36	38	36	49	54	28	22	28	38	51	40	46	34	24	36	34	21	29	39	56	58	52	43	51	54	67	65	39	34	61	41.
	Minimum....	22	33	30	23	31	26	21	10	7	24	33	30	33	12	6	22	13	7	11	16	35	35	30	23	28	34	43	38	23	27	33	24.
Jersey City.....	Maximum....	37	40	40	37	54	57	30	25	29	39	50	44	48	35	25	35	34	22	25	39	52	60	54	43	52	55	68	67	42	39	63	43.
	Minimum....	29	33	33	26	33	28	25	14	13	27	35	32	35	13	9	25	12	10	14	25	30	40	37	29	33	44	48	42	26	31	34	28.
Lambertville.....	Maximum....	38	39	38	40	54	53	38	34	32	40	48	47	44	28	36	35	24	30	40	53	59	58	49	50	56	66	66	58	42	61	47	45.
	Minimum....	30	36	34	31	33	34	27	17	18	28	36	33	34	24	20	23	12	8	13	23	36	38	35	27	32	38	45	53	29	34	37	28.
Little Falls.....	Maximum....	40	41	40	38	55	50	35	27	28	40	52	48	50	22	27	36	30	21	28	40	57	58	48	42	51	57	66	65	50	38	62	43.
	Minimum....	20	23	30	25	33	27	20	14	12	29	35	31	30	9	7	24	11	8	13	26	36	46	35	32	38	46	53	34	26	31	36	27.
Newark.....	Maximum....	36	37	39	37	55	55	29	22	28	36	52	35	46	29	22	33	29	20	29	39	58	58	45	43	54	55	68	65	36	35	62	41.
	Minimum....	27	33	30	16	32	25	19	12	12	25	35	29	29	8	6	22	10	8	12	23	37	41	33	27	39	49	34	24	28	35	25	25.
New Brunswick.....	Maximum....	39	38	39	50	51	57	30	27	29	36	49	45	47	39	22	35	34	21	32	43	58	64	67	43	52	57	73	...	52	37	63	44.
	Minimum....	26	34	32	28	29	29	24	13	11	22	35	29	32	19	7	21	9	6	12	18	35	37	38	27	28	36	42	52	24	29	34	26.
Paterson.....	Maximum....	38	38	40	37	47	55	30	26	29	37	52	45	48	39	27	36	35	23	32	42	60	60	56	45	53	58	69	67	48	34	63	44.
	Minimum....	23	33	33	25	32	28	24	12	11	24	36	30	31	17	7	22	14	9	13	20	36	36	35	26	30	39	47	48	24	27	34	26.
Plainfield.....	Maximum....	38	36	40	39	46	56	30	27	30	36	52	43	47	36	25	35	33	22	31	39	57	59	52	45	54	53	70	66	46	37	62	43.
	Minimum....	25	34	30	27	28	27	23	12	10	22	35	30	32	13	7	21	12	7	8	18	34	38	34	27	30	36	43	44	25	29	33	25.
Somerville.....	Maximum....	38	39	38	39	48	56	31	27	30	35	49	44	47	39	25	35	32	21	29	39	57	59	51	41	51	57	67	65	38	35	60	41.
	Minimum....	23	33	30	26	26	27	22	9	6	19	33	29	30	17	6	20	11	5	6	14	32	33	30	20	25	31	41	48	23	27	33	23.
South Orange.....	Maximum....	37	37	38	36	56	53	28	22	28	37	51	42	...	32	23	35	33	21	29	39	55	59	51	41	51	57	67	65	38	35	60	41.
	Minimum....	22	33	30	25	30	26	21	12	11	24	37	30	32	10	7	22	12	9	11	21	36	40	31	28	31	41	48	38	25	29	34	26.
New York, N. Y.....	Maximum....	41	42	40	38	56	56	30	24	30	40	51	38	51	30	25																	



Scale of Shades.

- 0 to 2 inches.
- 2 to 4 inches.
- 4 to 6 inches.
- 6 to 8 inches.
- Over 8 inches.

Stack

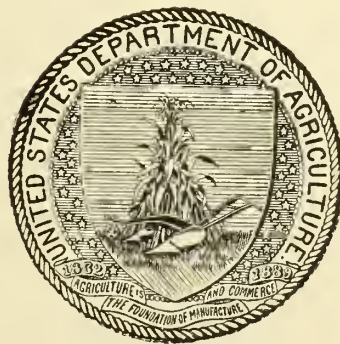
U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU
CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

FEBRUARY, 1916.

BY
G. HAROLD NOYES
SECTION DIRECTOR



TRENTON, N. J.
WEATHER BUREAU OFFICE
MARCH 17, 1916.

Departure of the Mean Temperature from the Normal, February, 1916.



Shaded portions show excess (+).
 Unshaded portions show deficiency (-).
 Lines show amount of excess or deficiency.

Scale: Miles 0 100 200
 Kilometers 0 100 200

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Section Director.

VOL. XXIX. TRENTON, N. J., FEBRUARY, 1916. No. 2.

GENERAL SUMMARY.

The prevailing idea of unpleasant weather in mid-winter along the northeastern Atlantic coast states, was characteristically exemplified by February weather in New Jersey. January is a month of comparative absence of rapid successive changes in the weather, and is slightly colder than February, but in 1916, January was 7° warmer than February, and as February was productive of more wind, precipitation, including snowfall, and cloudiness, than usual, it has left a record that is distinctly unfavorable. To begin with, the first day of the month averaged about 20° above normal in temperature, but was cooling steadily from maxima well above 60° at midnight at the close of January; and rain developed. The 2d was but slightly above normal in temperature, and on the 2d-3d, there was a snow storm of some 6 inches or more; and throughout the remainder of the month, fluctuations in conditions were both great and frequent. Successive clear days occurred but three times. Another generous fall of snow occurred on the 12th-13th, and in most of the northern half of the State there was good sleighing through most of the month. There were cold waves on the 8th, 14th, 19th, and 21st, but the coldest weather of the 14th-15th, when minima were mostly from zero to 18° below zero, could not be classified as unduly severe for this region. The cold weather, however, being interspersed with warm periods, did not produce a good ice crop from about the middle third of the State southward. The occurrence of rain with freezing temperature was particularly noticeable on the 2d, and 12th-13th, and communication and traffic was delayed and rendered precarious by reason of the "ice storm". The principal dates of precipitation were: the 1st 2d, and 3d, when it was unusually heavy, being considerably over an inch in nearly all sections, the 9th, 12th, 13th, 17th, 18th, 20th, and 24th-27th. There was no occurrence of snow blockade. Storm warnings were several times displayed along the coast.

At Phillipsburg the mean stage of the Delaware River was 3.7 feet, the highest being 7.8 feet. At Trenton the mean stage was 3.5 feet, which was 0.4 foot below normal. The highest was 6.3 feet on the 18th.

TEMPERATURE.

The monthly mean temperature of the State, as deduced from observations of 38 stations, was 28.1°, which was 2.0° below normal. The highest temperature was 63° on the 1st, at Im-laystown, Indian Mills, Lakewood, Long Branch, and Moores-town, and the lowest was 18° below zero at Layton and Sussex on the 15th. The highest monthly mean temperature was 32.8° at Cape May City, and the lowest mean 23.2° at Boonton. The greatest daily range of temperature was 51° at Layton. The mean temperature was below freezing at every station in the State except Bridgeton, Cape May City and Woodbine, and every station was below normal.

PRECIPITATION.

The average precipitation of the State, as deduced from observations of 44 stations, was 4.21 inches, which was 0.20 inch above normal. Amounts varied from slightly more than an inch above to an inch below normal. The greatest monthly amount was 6.17 inches at Lakewood, and the least 2.84 inches at Pleasantville. The greatest amount in 24 consecutive hours was 3.11 inches at Lakewood on the 25th. The total snowfall averaged 11.4 inches, which was 1.2 inches above normal. The greatest monthly snowfall was 22.1 inches at Culvers Lake, and the least 3.3 inches at Woodbine.

WIND.

The prevailing wind direction was from the northwest, with an approximate velocity of 15 miles per hour, which was somewhat above normal. The highest velocity, sustained for five consecutive minutes, was 67 miles per hour from the northwest on the 27th. There was practically no variation in direction throughout the entire State. High winds occurred on the 7th, 19th, 24th, 27th, and 28th.

SUNSHINE AND CLOUDINESS.

The average number of clear days was 10, or 1 less than normal; partly cloudy, 6, or 2 less than normal; cloudy, 13, or 4 more than normal. The average amount of sunshine was approximately 47 per cent. of the possible, which was somewhat below normal.

MISCELLANEOUS.

Atmospheric pressure, reduced to sea level, was 30.03 inches, which was 0.07 inch below normal. Highest readings occurred on the 4th, and lowest on the 25th and 26th. Sleet was reported from various stations on the 1st, 2d, 3d, 9th, 12th, 13th, 20th, 24th, and 26th. Dense fog occurred on the 1st, 12th, 17th, 18th, 23d, and 25th. Solar halos were observed on the 4th, 8th, 10th, and 16th; lunar halos on the 9th, 11th, 13th, and 17th.

COMPARATIVE DATA FOR FEBRUARY.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more prec.
1885.....	23.9	54	-2	3.93	5.85	1.44	.....	.....	.....	.....
1886.....	28.9	64	-10	5.42	8.00	4.13	.....	.....	.....	.....
1887.....	33.9	69	-6	5.24	6.74	4.13	.....	.....	.....	.....
1888.....	30.6	60	-5	3.53	6.01	2.04	.....	.....	13	13
1889.....	27.7	53	-3	2.49	3.80	1.65	.....	.....	9	8
1890.....	39.9	76	14	4.17	5.32	2.43	.....	.....	12	10
1891.....	38.0	71	1	5.11	7.20	3.70	.....	.....	13	14
1892.....	33.6	58	-7	1.63	3.62	0.67	6	9	13	7
1893.....	30.1	63	-1	5.73	8.90	3.14	.....	.....	13	11
1894.....	29.7	62	-11	4.42	6.17	3.25	9	8	11	11
1895.....	23.6	57	-12	1.28	2.34	0.55	13	9	6	5
1896.....	32.1	62	-12	6.77	10.06	4.82	9	9	11	12
1897.....	32.5	59	-6	3.61	6.37	2.58	8	10	10	8
1898.....	32.7	65	-15	3.48	5.45	1.55	12	7	9	9
1899.....	25.8	60	-17	6.06	8.77	3.78	10	6	12	15
1900.....	31.0	69	-6	5.30	7.88	3.27	9	9	10	10
1901.....	25.4	52	-6	<i>0.01</i>	<i>1.65</i>	<i>0.69</i>	15	9	4	4
1902.....	27.4	62	-7	6.24	8.44	4.29	12	6	10	9
1903.....	33.7	70	-16	4.87	6.60	3.74	12	8	8	10
1904.....	24.8	65	-16	2.45	3.09	1.36	13	8	8	8
1905.....	23.4	53	-18	2.53	3.96	0.70	14	7	7	7
1906.....	30.9	64	-12	2.38	3.85	1.77	14	7	7	7
1907.....	23.6	55	-22	2.67	3.90	1.82	14	7	7	7
1908.....	28.1	65	-17	4.79	7.44	2.85	10	10	9	9
1909.....	37.8	72	-2	4.96	6.78	3.55	6	10	12	12
1910.....	30.5	69	-11	3.08	4.81	1.06	10	9	9	10
1911.....	30.9	67	-12	2.78	4.06	1.76	8	7	13	11
1912.....	27.7	61	-14	2.49	3.12	1.68	11	12	6	7
1913.....	30.6	70	-5	2.49	3.21	1.48	16	6	6	7
1914.....	25.9	67	-17	2.85	4.94	1.89	12	7	9	9
1915.....	35.7	75	-2	5.37	7.28	2.97	11	6	11	8
1916.....	28.1	63	-18	4.21	6.17	2.84	10	6	13	11

Climatological data for February, 1916.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.				Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation all in, or more.	Clear.	Pt. cloudy.		Cloudy.	Prevailing direction of wind.
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	25	26.4	-1.0	57	1	-8	15	39	3.70	-0.77	1.75	12.8	8	12	4	13	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	24	24.7 ^a	-1.6	55	1	-8	14 [†]	37	3.52	-1.31	2.57	.....	10	10	13	6	nw.	George S. Briggs.
Culvers Lake.....	Sussex.....	848	15	.....	.....	.....	.....	-16	15	.....	3.54	+0.07	1.50	22.1	12	12	5	12	n.	Brice E. Riker.
Dover.....	Morris.....	600	32	24.1	-2.1	58	1	-7	14 [†]	39	4.25	-0.14	.....	.....	10	3	10	16	.....	William C. Harris.
Layton.....	Sussex.....	480	16	23.4	-0.7	56	1	-18	15	51	3.80	+0.22	1.68	16.4	10	10	6	13	sw.	A. M. Depue.
Newton.....	Sussex.....	678	35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Irving G. Kern.
Phillipsburg.....	Warren.....	363	34	26.6	-1.2	61	1	-5	15	35	3.67	-0.26	1.38	14.4	11	9	4	16	nw.	D. Wilson Smith.
Sussex.....	Sussex.....	442	26	23.3	-2.9	56	1	-18	15	44	3.47	-0.20	1.62	18.0	11	10	2	17	ne.	George Dymock.
Means and extremes.....				24.7	-1.6	61	1	-18	15	51	3.71	-0.34	2.57	16.7	10	10	6	13	nw.	
<i>The Red Sandstone Plain.</i>																				
Bayonne.....	Hudson.....	50	26	27.6	-2.9	60	1	0	14 [†]	28	4.61	+0.46	2.11	14.0	11	16	2	11	n.	Erskine R. Eadie.
Bergen Point.....	Hudson.....	37	19	27.6 ^b	-2.8	62	1	-1	14	35	5.03	+0.48	.....	.....	9	.....	.....	.....	nw.	William H. Mitchell.
Bonton.....	Morris.....	400	26	23.2	.....	52	1	-9	15	40	3.69	-0.67	1.54	11.7	12	12	2	15	uw.	J. W. Demmers.
Chatham.....	Morris.....	234	14	.....	.....	.....	.....	.....	.....	.....	5.04	+1.04	2.20	15.5	9	.....	.....	.....	.....	Miss M. A. Butler.
Elizabeth.....	Union.....	45	37	28.2	-2.2	61	1	-8	15	39	5.58	+1.17	.....	15.0	13	8	10	11	w.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	28	27.7	-2.8	60	1	-10	15	45	3.03	-0.48	1.46	15.5	10	14	1	14	w.	Hiram E. Deats.
Highwood.....	Bergen.....	90	27	25.0	-3.7	57	1	-12	15	41	4.89	+0.20	2.48	18.4	9	7	10	12	nw.	Charles J. Bates.
Jersey City.....	Hudson.....	10	17	28.7	-2.5	61	1	1	14 [†]	28	4.92	+0.84	2.29	15.4	13	8	7	14	nw.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	29	30.2	-0.2	61	1	0	14	32	3.02	-0.65	0.77	8.0	8	8	10	11	nw.	Samuel W. Cochran.
Little Falls.....	Passaic.....	180	13	27.3 ^a	.....	58	1	-2	14	26	4.79	+0.35	2.26	11.6	12	10	1	18	w.	Montclair Water Co.
Newark.....	Essex.....	159	74	26.6	-3.2	59	1	-1	14	28	4.13	+0.32	2.36	13.6	13	8	3	18	w.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	110	63	28.4	-2.9	62	1	-4	15	37	4.42	+0.60	2.00	11.3	11	10	5	14	w.	N. J. Experiment Station.
Paterson.....	Passaic.....	80	45	28.0	-2.2	60	1	-1	15	35	5.20	+0.64	2.78	18.4	13	5	13	11	uw.	Heber A. Probert.
Plainfield.....	Union.....	100	30	27.6	-2.6	59	1	-3	15	30	4.47	+0.42	2.20	11.7	10	8	6	15	sw.	John Neagle.
Pompton Plains.....	Morris.....	195	14	.....	.....	.....	.....	.....	.....	.....	4.93	+0.34	1.73	16.5	9	.....	.....	.....	.....	M. S. Taylor
Somerville.....	Somerset.....	60	34	26.7	-3.3	59	1	-10	15	43	4.50	+0.82	1.93	11.2	9	10	6	13	nw.	A. A. Macdonald.
South Orange.....	Essex.....	200	46	26.6	-2.4	52	1	-1	14	31	4.73	+0.57	2.20	17.0	10	8	7	14	u.	Dr. W. J. Chandler.
New York, N. Y.....		365	46	27.7	-3.0	61	1	1	14	26	4.49	+0.62	2.02	11.5	13	6	7	16	nw.	U. S. Weather Bureau.
Means and extremes.....				27.3	-2.6	62	1	-12	15	45	4.53	+0.38	2.78	14.0	11	9	6	14	nw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	35	32.1	-1.8	60	1	2	15	32	4.35	+0.10	1.00	6.0	10	11	4	14	w.	Henry A. Jorden.
Burlington.....	Burlington.....	12	30	30.0	.....	62	1	1	14 [†]	36	3.57	-0.30	1.03	5.9	10	14	5	10	nw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	24	30.7	-1.0	61	1	0	15	34	3.86	-0.30	0.88	5.5	9	10	8	11	nw.	George L. Wilson.
Haddonfield.....	Camden.....	75	29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Chas. F. Richardson.
Hammonton.....	Atlantic.....	103	18	.....	.....	.....	.....	.....	.....	.....	4.01	-0.02	1.17	4.3	14	12	7	10	nw.	Frederick H. Hoefler.
Hightstown.....	Mercer.....	140	24	28.4 ^c	-1.7	62	1	-9	15	34	3.36	-0.51	.....	.....	.....	7	9	13	nw.	Leon Dunbar.
Inlaystown.....	Monmouth.....	185	28	27.2	-3.7	63	1	-5	15	41	3.80	+0.09	1.40	.....	7	11	4	14	w.	H. E. Bullock.
Indian Mills.....	Burlington.....	76	27	30.2	-1.9	63	1	-5	15	40	4.97	+0.87	1.01	9.2	12	9	9	11	nw.	James M. Armstrong.
Lakewood.....	Ocean.....	54	13	28.6	-1.2	63	1	-4	15	42	6.17	+2.19	3.11	7.0	9	6	7	16	w.	R. W. Holman.
Moorestown.....	Burlington.....	75	54	30.6	-0.4	63	1	-1	15	33	3.57	-0.19	1.04	7.2	10	7	12	10	nw.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	9	.....	.....	.....	.....	.....	.....	.....	4.45	.....	1.25	5.2	10	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	18	.....	.....	.....	.....	.....	.....	.....	2.84	-0.23	0.61	.....	10	13	1	15	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	45	27.8	-2.9	62	1	0	14	27	3.16	-0.15	1.16	6.7	11	8	5	16	nw.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	23	31.0 ^a	-1.1	60	1	-2	15	37	3.93	0.00	0.90	10.0	10	15	5	9	nw.	Frank R. Austin.
Vineland.....	Cumberland.....	87	48	31.4	-1.1	61	1	-1	15	32	3.37	-0.82	0.86	6.0	10	7	5	17	nw.	E. V. C. Hendricks.
Woodbine.....	Cape May.....	43	25	32.6	0.0	62	1	0	15	37	5.34	+1.15	1.40	3.3	11	13	3	13	nw.	Baron de Hirsch Agr. Sch.
Philadelphia, Pa.....		117	46	31.3	-0.5	61	1	5	14	27	3.55	+0.07	0.93	8.2	13	8	8	13	nw.	U. S. Weather Bureau.
Means and extremes.....				30.0	-1.5	63	1	-9	15	42	4.05	+0.13	3.11	6.4	10	10	6	13	nw.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	27	29.2	-2.7	62	1	4	15	28	3.93	-0.04	1.50	10.0	12	10	8	11	w.	Wilbur H. Pancoast.
Atlantic City.....	Atlantic.....	16	43	31.7	-1.3	56	1	4	15	27	4.54	+1.16	1.30	5.0	9	5	9	15	nw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	32	32.8	-1.3	53	1	5	14	26	4.00	+0.61	1.01	6.3	11	6	13	10	nw.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	9	27.4	.....	63	1	0	14	34	4.68	.....	1.99	12.9	13	8	4	17	nw.	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	18	28.9	-1.8	60	1	6	14	23	4.60	+0.90	1.91	12.9	14	7	9	13	w.	U. S. Weather Bureau.
Means and extremes.....				30.0	-1.8	63	1	0	14	34	4.35	+0.66	1.99	9.4	12	7	9	13	nw.	
For the State.....				28.1	-2.0	63	1	-18	15	51	4.21	+0.20	3.11	11.4	11	10	6	13	nw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

* Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Vineland is South Vineland.

Note.—The precipitation normals for February in a bissextile year are about 0.1 inch greater than for February in a common year.

Daily precipitation for February, 1916.

Stations.	Day of month.																															Total.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>The Highlands and Kittatinny Valley.</i>																																	
Albion	.19	.50	.22									*	.80				T.	.14			.10				1.75							3.70	
Blotterburg	* .03	.52			T.				.05		T.	*	.28				T.	*		.10					2.57							3.52	
Cherry Lake	.10	.61	.16		T.	T.			.04		.06	.12	.56			T.	T.	.12		.07	T.			T.	1.50	.19	.01	T.				3.51	
Clinton	.36	.10							.05		.05	*	.95				.10	.07		.10				*	2.52							4.25	
Clinton	.09	.58	.14						T.		.06	.14	.55				T.	.13		.13				T.	1.68	.30	T.	T.				3.80	
Clinton																																\$	
Clinton	.17	.52	.14				T.				.01	.34	.73				.07	.07		.06	T.			T.	1.38	.18	T.	T.				3.67	
Clinton	* .08	* .85	.63						.03		.06	.20	.70				.02	.13		.08				T.	1.62							3.47	
<i>The Red Sandstone Plain.</i>																																	
Clinton	.17	.85	.28						.04		T.	.27	.51				T.	.09		.05					.04	.21	.20	T.				4.61	
Clinton	.20	.90	.42						.04		T.	.25	.66				T.	T.		*				*	2.56							5.03	
Clinton	.03	.24	.56			T.	T.		.01		.01	.64	.16				.01		.02	T.	.04				.43	1.54	T.	T.				3.69	
Clinton	.08	T.	.85	.32							T.	.12	.35						.08	T.	.14				.90	2.20						5.04	
Clinton	.19	*	1.35						.03		.02	*	1.01				.01	.05		.03				*	* 2.89	T.						5.58	
Clinton	.19	.60	.20				T.				T.	.10	.30				.05	.02		.05			T.	T.	1.46	.06						3.03	
Clinton	T.	.88	.54			T.			.03		T.	.14	.72				T.	.07		.03				T.	2.21	.27	T.	T.				4.89	
Clinton	.09	.81	.55			T.			.03		.01	*	.98				.01	.04		.07				.03	2.29	.01	T.					4.92	
Clinton	.24	.57	.31								T.	.28	.67				.07				T.			T.	.77	.11	T.					3.02	
Clinton	.05	.85	.25					T.	.02		.02	.26	.68				.04			.07				.20	2.26	.09						4.79	
Clinton	.11	.50	.15		T.	T.			.02		.02	.15	.40				.01	.03		.11				.24	.36	.03	T.					4.13	
Clinton	.25	.71	.58						T.		.07	.40					.10	.01		.09	.02			T.	2.00	.19	T.	T.				4.42	
Clinton	.09	.74	.33		T.	T.			.01		.02	.25	.68	.01			T.	.04		.07	.01		T.	T.	2.78	.17	T.	T.				5.20	
Clinton	.15	.66	.44					T.	.01		T.	.45	.36				.02	T.		.05			T.	.22	.11	T.						4.47	
Clinton	.06	.14	.84						T.		.07	.64	.57							T.	.12			.76	1.73	T.	T.					4.93	
Clinton	.18	.78	.56						T.		.03	.24	.51				*	*		.13				T.	1.93	.14						4.50	
Clinton	.09	.60	.50		T.				.03		T.	.25	.55				T.	T.		.07				.23	2.20	.21	T.					4.73	
Clinton	.13	.74	.27			T.		T.	.03		.02	.35	.67				.01	.05		.06				.26	1.87	.03	T.					4.49	
<i>The Southern Interior.</i>																																	
Clinton	1.00	.65	.67						.43		.22	.21					.20	T.						.60	.32	.05						4.35	
Clinton	.34	.66	.43						.08		T.	.21	.65				.06			T.	.03			T.	1.03	.08		T.					3.57
Clinton	.62	.11	.88						.17			.51	.61				.06				.01			.06	.83	T.	T.					3.86	
Clinton	.65	.39	.47				.05		.32			.17	.73	.01			.08	T.		T.	.02			.01	1.17	.02	.01					4.01	
Clinton		.93										1.13												.130								3.36	
Clinton	.40	.60	.50					T.			.10	.70		.10			.10			T.	.02			T.	1.40							3.80	
Clinton	.55	1.01	.56					.25			.24	.98					.10			T.			.04	1.00	.10	.12						4.97	
Clinton	.47	.55	.65					.24			.22	.80					.08	T.		T.				.05	3.11	T.	T.					6.17	
Clinton	.30	.67	.50					.20			.30	.38	.05				.09			T.	T.			T.	1.04	.04	T.					3.57	
Clinton	1.25	.46	.60					.52			.05	.30	.03				.06			T.				.12	1.06							4.45	
Clinton	.57	.28	.61					.29		T.	.20	.29	T.				.05			T.				.20	.34	.01	T.					2.84	
Clinton	.25	.98	.23					.01		T.	.46	.27				.01	.06	T.		.04			T.	.16	.69	T.	T.					3.16	
Clinton	.74	.21	.63					T.		T.	.35	.40				*				*			T.	.60	.90	T.	T.					3.93	
Clinton	.86	.30	.47					.44			.11	.19	.04				.12	T.		T.			T.	.03	.81	T.	T.					3.37	
Clinton	1.40	.60	.47					.60	.10			.03	.55				.20	T.		T.				.05	1.28	.06						5.34	
Clinton	.32	.93	.25					.08		T.	.59	.27					.07	T.		.04			T.	.41	.49	.01	.07					3.55	
<i>The Sea Coast.</i>																																	
Clinton	.41	.02	.40			.24	.05		.02		T.	.24	.40				T.			.05				.55	1.50	T.	.05					3.93	
Clinton	1.19	.62	.45					.59		T.	.22	.33	T.				.05	T.	T.					.64	.45	T.	T.					4.54	
Clinton	.81	.68	.43					.59			.08	.28					.07	.07		T.			T.	.41	.56			.02				4.00	
Clinton	.16	.76	.19		T.		T.	.01		.01	.01	.40	.70				.01	.06		.07				.28	1.99	.04	T.					4.68	
Clinton	.25	.47	.64			.01	T.	.02		.02	.01	.14	.76				.03	.04		.06			T.	.41	1.73	.03	T.					4.60	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24 hour period, midnight to midnight. † Separate dates of falls not recorded. †† Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing. * Precipitation included in the next following measurement. **Precipitation for 24 hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.			Moisture.		Sun- shine	
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.		Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	Percentage of possible sunshine	
							Miles per hour.	Direction.				
												Date.
Antie City.....	30.05	30.64	4	29. 07	25	10	32	nw.	19	79	74	45
ury Park.....	30.06	30.65	4	29. 20	25	11	40	nw.	19			
e May City.....	30.02	30.60	4	29. 04	26							45
ey City.....	30.06	30.60	4	29. 09	26	18	67	nw.	27	76	67	53
g Branch.....							40	nw.	19	*73	165	
ark.....	30.01	30.59	4	28. 02	26	20	75	nw.	27	72	60	51
y York, N. Y.....	30.06	30.62	4	29. 10	25	12	42	nw.	19	70	63	14
adelphia, Pa.....	30.02	30.61	4	29. 02	26	21	63	w.	19	81	75	44
dy Hook.....	30.02	30.59	4	29. 07	25	14	54	nw.	19	80	72	40
nton.....												

§ Two directions and dates.

* 7 a. m.

† 9 p. m.

Daily temperature for February, 1916.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	M.	
<i>The Highlands and Kittatinny Valley.</i>																																	
Belvidere.....	Maximum	57	42	34	30	38	44	40	27	37	36	32	28	26	22	31	35	43	39	36	...	29	40	43	40	40	35	33	30	35	...	...	
	Minimum	42	23	22	5	10	22	20	9	21	22	20	22	16	-2	-8	12	28	26	8	14	4	4	25	21	21	29	17	16	14	...	...	
Charlotteburg.....	Maximum	55	40	26	26	33	46	40	24	35	34	31	23	23	17	29	31	28	37	35	...	26	38	45	40	44	44	32	24	13	...	...	
	Minimum	40	21	19	9	15	31	20	8	17	18	15	19	16	-8	-8	6	27	24	4	10	-1	12	25	19	28	25	14	13	11	...	...	
Dover.....	Maximum	58	35	28	27	33	44	39	24	36	32	28	23	25	13	28	31	41	38	29	29	19	39	44	30	42	38	27	...	...	...		
	Minimum	33	22	14	9	20	29	12	9	18	20	18	21	9	-7	-7	9	27	26	5	12	1	0	26	24	31	26	16	13	14	...	...	
Layton.....	Maximum	56	40	28	31	34	42	41	26	37	35	30	21	22	19	33	34	39	37	37	24	7	22	37	44	39	41	40	30	24	36	...	
	Minimum	40	23	18	-2	8	22	18	5	18	18	9	19	13	-6	-18	15	27	27	4	7	-4	-10	22	18	22	26	15	14	6	...	...	
Newton.....	Maximum	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Minimum	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Phillipsburg.....	Maximum	61	35	30	27	37	43	40	24	36	35	33	27	26	19	30	34	45	41	38	32	30	40	43	40	40	40	32	28	33	...	...	
	Minimum	35	23	21	10	16	26	21	9	21	23	22	22	15	0	-5	16	28	28	8	15	6	9	28	21	32	29	19	16	15	...	...	
Sussex.....	Maximum	56	41	27	32	36	43	40	26	34	35	30	21	20	13	26	34	38	37	33	20	21	37	43	30	37	29	30	24	35	...	...	
	Minimum	41	20	19	2	12	26	13	11	18	20	15	18	12	-9	-18	10	24	28	6	9	-2	3	28	17	29	27	16	14	12	...	...	
<i>The Red Sandstone Plain.</i>																																	
Bayonne.....	Maximum	60	45	31	28	38	46	40	25	36	34	33	28	27	17	25	35	42	39	35	32	26	41	42	40	40	33	27	32	...	...		
	Minimum	43	25	18	14	22	31	21	13	23	25	23	24	26	18	0	17	29	30	10	16	6	13	31	26	32	31	19	17	...	...		
Bergen Point.....	Maximum	62	43	32	29	38	48	42	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Minimum	43	24	20	13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Boonton§§.....	Maximum	52	28	29	28	35	45	39	27	36	34	25	25	21	12	29	34	42	40	19	30	19	38	45	48	45	35	24	27	34	...	...	
	Minimum	32	25	22	0	6	19	23	11	12	22	17	20	20	-5	-9	-3	14	26	7	3	19	38	45	48	45	34	30	35	...	...		
Elizabeth.....	Maximum	61	45	34	29	39	47	41	26	38	38	33	28	27	19	31	36	48	43	40	33	23	41	42	39	46	45	34	30	35	...	...	
	Minimum	45	26	23	8	15	26	26	11	22	23	23	25	19	-2	-8	13	29	27	9	16	6	28	28	32	31	20	18	16	...	...		
Flemington.....	Maximum	60	43	33	32	37	45	40	27	37	38	34	27	29	18	35	35	46	45	39	32	32	43	42	41	43	35	32	31	...	...		
	Minimum	42	26	20	8	12	23	21	10	22	24	24	25	18	-2	-10	10	30	27	9	15	7	3	26	28	33	45	42	33	26	...	...	
Highwood.....	Maximum	57	41	29	22	36	44	40	25	36	34	30	25	24	16	25	34	42	39	38	24	23	39	38	33	45	42	33	26	...	...		
	Minimum	41	24	12	4	14	25	19	10	22	22	20	23	15	-5	-12	5	29	27	9	7	4	42	42	34	50	43	33	28	...	...		
Jersey City.....	Maximum	61	42	34	28	37	44	42	25	37	36	30	29	28	16	27	34	44	40	38	32	25	42	42	34	50	43	33	28	...	...		
	Minimum	42	26	23	16	23	34	22	13	25	25	24	25	15	1	1	20	29	33	10	16	7	16	32	29	32	32	21	19	...	...		
Lambertville.....	Maximum	61	46	31	29	41	46	46	27	39	37	37	31	34	22	30	36	44	44	42	35	34	41	43	41	43	40	37	27	...	...		
	Minimum	46	28	25	15	22	29	25	13	25	27	28	28	19	0	2	17	30	32	10	19	11	14	31	31	33	31	21	18	...	...		
Little Falls.....	Maximum	58	40	32	33	38	48	42	35	39	36	30	28	20	20	26	35	44	42	26	30	20	2	2	26	24	33	27	...	...			
	Minimum	37	26	18	15	22	27	16	13	25	24	21	24	10	-2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Newark.....	Maximum	59	40	29	26	36	43	40	25	37	33	28	23	24	13	28	33	44	41	26	29	25	41	45	31	45	37	30	27	...	...		
	Minimum	40	23	19	14	21	33	15	11	24	25	21	22	10	-1	0	21	29	26	9	15	5	14	30	27	31	43	42	34	...	...		
New Brunswick.....	Maximum	62	46	35	26	38	45	41	23	37	38	39	34	28	24	23	34	43	42	40	32	32	44	42	41	43	42	34	26	...	...		
	Minimum	45	25	23	11	18	28	23	11	22	25	23	24	19	-1	-4	16	28	29	8	15	6	7	29	28	32	31	21	17	...	...		
Paterson.....	Maximum	60	45	33	30	37	47	42	26	37	32	25	27	19	29	36	45	40	37	25	26	43	40	37	44	41	33	30	35	...	...		
	Minimum	45	25	23	11	19	31	23	13	22	24	24	24	18	0	-1	18	30	29	9	14	5	8	29	27	32	31	21	17	...	...		
Plainfield.....	Maximum	59	43	33	28	39	46	43	25	37	35	32	27	15	26	35	46	42	39	32	27	43	42	36	45	42	32	30	...	...			
	Minimum	43	25	19	10	16	26	18	11	22	24	23	24	15	-2	-3	13	29	28	9	14	6	14	29	21	32	31	21	18	...	...		
Somerville.....	Maximum	59	45	30	29	38	46	41	26	36	36	35	30	20	27	34	47	43	38	32	30	40	43	40	40	41	38	35	29	...	...		
	Minimum	44	24	21	2	10	23	23	9	20	23	22	23	20	-5	-10	4	26	27	8	14	5	0	24	27	31	30	19	17	...	...		
South Orange.....	Maximum	52	40	30	26	37	44	40	25	38	34	31	25	23	13	28	33	43	40	30	32	25	40	45	34	44	41	30	26	...	...		
	Minimum	40	25	19	13	18	32	17	11	23	24	22	23	13	-1	0	18	29	30	9	15	5	9	30	27	33	30	18	16	...	...		
New York, N. Y.....	Maximum	61	39	31	26	38	46	41	26	38	34	31	30	28	10	28	34	43	43	27	31	24	41	47	35	50	38	30	27	...	...		
	Minimum	39	24	20	16	21	34	17	12	25	25	22	26	10	1	2	20	28	27	9	16	5	18	32	29	33	30	18	18	...	...		
<i>The Southern Interior.</i>																																	
Bridgeton.....	Maximum	60	45	30	34	42	58	48	32	38	42	40	42	35	20	26	40	44	53	45	43	42	46	55	48	42	40	35	30	...	...		
	Minimum	42	30	20	12	20	29	27	15	26	25	28	30	20	3	2	12	30	31	13	21	16	15	35	20	37	32	24	20	...	...		
Burlington.....	Maximum	62	44	30	2																												

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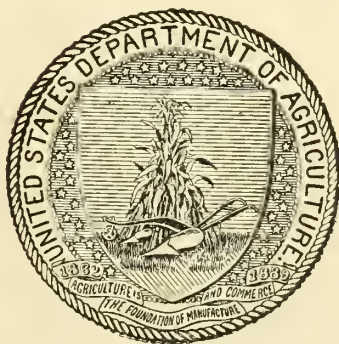
U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU
CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

MARCH, 1916.

BY
G. HAROLD NOYES
SECTION DIRECTOR



TRENTON, N. J.
WEATHER BUREAU OFFICE
APRIL 21, 1916.

Departure of the Mean Temperature from the Normal, March, 1916.



Shaded portions show excess (+).
 Unshaded portions show deficiency (-).
 Lines show amount of excess or deficiency.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Section Director.

VOL. XXIX. TRENTON, N. J., MARCH, 1916. No. 3.

GENERAL SUMMARY.

The general characteristic that in the northeastern United States March weather is generally disagreeable was amply borne out by the conditions that prevailed in New Jersey in March, 1916. Cold, snow, bluster, is the summary. Conditions throughout the State as a whole, were first compiled in 1885, and the March average temperature of that year was the lowest ever recorded, but the precipitation was also the least on record, consequently there was little snow. But in March under review the temperature was lower than any other March except 1885, and at the same time was one of the most snowy. At some stations the record for depth of snow for the month was closely approached, and it is probable that the number of snowy days was about the largest ever known, although this is not a point of exact record. There were no falls of snow in 24 hours of more than 10 inches, the greatest monthly amounts of about 40 inches being in Sussex county, and the least, 6 inches, in the southeastern counties. In the first 23 days of the month there was some snow practically every day in some portion of the State. At the close of the month there was considerable snow remaining on the ground in northern portions of the State, but mostly only on wooded hillsides sloping northward. Generally speaking, the snow disappeared on the 25th and 26th. The temperature was above normal only on 6 or 7 days throughout the month, and on but 1 before the 25th, and this reveals the persistent cold that was provocative of frequent remark.

March is conspicuous for its wide variations in temperature, the warmest March was in 1903 when the mean State temperature was 47.6°, and the low records have been 30.4° in 1885, and 31.7° in 1916, and extremes of temperature have ranged from 89° in 1908 to 15° below zero in 1906. The wind movement was greater than usual which was another feature that further accentuated the winter characteristics of the weather. Two successive clear days occurred but once. The rapid rise in temperature at the close of the month was followed by a corresponding rise in the Delaware River.

The mean daily stage of the Delaware River at Phillipsburg was 3.8 feet; the highest water was 14.8 feet on the 31st. At Trenton, the mean stage for the month was 2.6 feet, which was 6 feet below normal; the highest stage was 8.8 feet on the 31st. Storm warnings were displayed along the coast on the 3d, 4th, 5th, 8th, 9th, 10th, 14th, 15th, 16th, and 22d.

TEMPERATURE.

The monthly mean temperature of the State, as deduced from observations of 40 stations, was 31.7°, which was 6.3° below normal. The highest temperature was 71° at Flemington on the 1st, and the lowest, 9° below zero at Culvers Lake on the 18th. The highest monthly mean temperature was 35.8° at Bridgeton, and the lowest monthly mean, 27.1° at Layton. The greatest daily range of temperature was 47° at Layton.

PRECIPITATION.

The average precipitation of the State, as deduced from observations of 43 stations, was 3.48 inches, which was 0.57 inch below normal. The greatest monthly amount was 4.96 inches at Woodbine, and the least, 2.38 inches at Newark. The greatest amount in 24 consecutive hours was 2.02 inches. The total snowfall averaged 19.3 inches, which was 13.4 inches above normal. The greatest snowfall was 40.4 inches at Culvers Lake, and the least, 5.7 inches at Hammonton. The principal, general snowstorms occurred on the 2d, 6th, 8th, 15th-16th, and 21st-22d, the last, however, was light in the southern half of the State. The average number of days on which precipitation occurred was 12, which was 1 more than normal.

WIND.

The prevailing wind direction was from the northwest, with an approximate velocity of 15 miles per hour, which was somewhat above normal. The highest velocity, sustained for 5 consecutive minutes, was 60 miles per hour from the northwest, at Long Branch on the 5th. High winds also occurred on the 4th, 8th, 9th, 10th, 15th, 16th, 17th, 22d, 23d, and 28th.

SUNSHINE AND CLOUDINESS.

The average number of clear days was 13; partly cloudy, 8; cloudy, 10; which was 2 more clear, and 1 each less partly cloudy and cloudy, than normal. The average amount of sunshine was approximately 56 per cent. of the possible and was not far from normal.

MISCELLANEOUS.

Atmospheric pressure, reduced to sea level, was 29.95 inches, which was 0.06 inch below normal. Highest readings occurred on the 20th, and lowest on the 22d. The principal occurrences of sleet were on the 6th, 7th, 8th, 14th, 15th, and 22d. Solar halos were observed on the 18th, 20th, and 24th, and lunar halos on the 13th. Fog occurred on the northeastern coast on the 7th and 8th. Thunder was heard on the 14th, 15th, and 22d.

COMPARATIVE DATA FOR MARCH.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.40 inch or more precip.
1885.....	30.4	66	2	1.10	2.29	0.23				
1886.....	37.7	70	9	3.70	5.27	2.59				
1887.....	37.7	61	8	3.34	5.45	2.19				
1888.....	32.8	72	0	5.71	8.22	3.75			13	10
1889.....	40.5	67	19	3.79	6.49	1.98			12	11
1890.....	37.6	78	0	6.08	7.92	4.14			13	8
1891.....	37.2	68	4	5.06	8.02	2.05	8	10	13	14
1892.....	34.4	64	6	4.75	7.21	3.11	10	12	9	9
1893.....	37.0	68	6	3.73	6.26	2.36	10	10	11	10
1894.....	44.2	83	12	1.77	2.65	1.09	12	11	8	10
1895.....	36.7	72	7	3.16	4.66	1.77	12	8	11	10
1896.....	34.0	69	-8	5.34	7.38	3.14	13	8	10	11
1897.....	40.0	77	18	2.78	4.32	1.55	11	9	11	10
1898.....	45.1	77	16	3.33	4.25	2.56	9	10	12	12
1899.....	38.6	73	3	6.54	9.58	3.45	7	10	14	13
1900.....	35.6	67	-9	3.51	4.96	2.48	12	12	7	10
1901.....	39.2	75	-8	4.64	8.07	2.40	9	10	12	12
1902.....	43.9	77	0	4.34	7.20	3.16	12	10	9	11
1903.....	47.6	79	13	5.13	8.53	3.60	11	8	12	10
1904.....	37.2	72	1	3.43	4.76	2.02	11	8	12	13
1905.....	39.8	87	-7	3.95	5.06	2.80	14	8	9	12
1906.....	34.4	62	-15	5.09	6.77	2.91	10	9	12	11
1907.....	41.2	88	-11	3.04	4.38	1.81	13	10	8	10
1908.....	41.8	89	7	2.80	4.92	1.06	11	9	11	12
1909.....	38.3	74	-6	3.48	4.66	2.31	12	10	9	13
1910.....	44.5	88	10	1.22	2.36	0.29	14	10	7	6
1911.....	37.6	76	3	3.38	4.50	2.64	10	12	9	11
1912.....	36.9	72	3	7.61	9.61	5.95	9	11	11	14
1913.....	44.8	79	-1	5.15	7.73	2.47	10	9	12	12
1914.....	35.4	75	-6	3.65	6.45	2.02	13	10	8	10
1915.....	36.1	63	6	1.13	1.65	0.58	20	7	4	3
1916.....	31.7	71	-9	3.48	4.96	2.38	13	8	10	12

Climatological data for March, 1916.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation .01 in. or more.	Clear.	Pt. cloudy.			Cloudy.	
<i>The Highlands and Kittatinny Valley.</i>																					
Belvidere.....	Warren.....	289	25	31.2	-5.6	70	31	3	18	39	3.77	-0.27	0.92	24.7	8	15	4	12	.....	Samuel J. Hixson.	
Charlotteburg.....	Passaic.....	719	24	28.6	-6.1	65	31	-1	18	37	2.49	-1.45	.....	23.0	12	18	8	5	nw.	George S. Briggs.	
Culvers Lake.....	Sussex.....	848	15	.....	.....	.....	.....	-9	18	.....	3.64	+0.21	0.71	40.4	14	16	8	7	n.	Brice E. Riker.	
Dover.....	Morris.....	600	32	28.8 ^a	-6.1	68	31	1	18	34	3.56	-0.34	1.01	26.0	11	.....	.....	.....	.....	William C. Harris.	
Layton.....	Sussex.....	480	16	27.1	-7.1	66	31	-7	18	47	3.44	-0.23	0.78	39.4	12	17	4	10	w.	A. M. Depue.	
Newton.....	Sussex.....	769	35	27.5	-8.3	59	30	-2	18	34	2.51	-1.09	0.56	28.8	12	10	13	8	ne.	Irving G. Kern.	
Phillipsburg.....	Warren.....	363	34	31.4	-6.5	68	31	4	18	31	3.37	-0.28	0.85	22.1	14	13	7	11	nw.	D. Wilson Smith.	
Sussex.....	Sussex.....	442	26	27.8	-8.6	65	31	0	18	34	3.79	+0.12	1.06	33.0	8	14	5	12	nw.	George Dymock.	
Means and extremes.....				28.9	-6.9	70	31	-9	18	47	3.32	-0.42	1.06	29.7	12	15	7	9	nw.		
<i>The Red Sandstone Plain.</i>																					
Bayonne.....	Hudson.....	50	26	31.6	-6.4	64	31	6	18	27	2.64	-1.59	0.68	21.0	11	18	3	10	sw.	Erskine R. Eadie.	
Bergen Point.....	Hudson.....	37	19	31.4	-6.4	64	31	5	18	35	3.04	-1.18	0.93	22.0	8	12	11	8	nw.	William H. Mitchell.	
Boonton.....	Morris.....	400	26	28.9	.....	66	31	4	12†	35	2.81	-0.93	0.81	22.0	15	18	3	10	nw.	J. W. Demmers.	
Chatham.....	Morris.....	330	14	.....	.....	.....	.....	.....	.....	.....	3.48	-0.39	0.83	24.5	14	.....	.....	.....	.....	Miss M. A. Butler.	
Elizabeth.....	Union.....	45	37	32.2	-6.2	69	31	4	18	36	3.80	-0.46	1.08	26.5	18	8	14	9	ne.	L. B. Bonnett.	
Flemington.....	Hunterdon.....	140	28	32.4 ^a	-5.1	71	31	5	18	36	2.94	-0.67	0.50	16.0	13	19	2	10	w.	Hiram E. Deats.	
Highwood.....	Bergen.....	90	27	29.6	-6.6	65	31	4	18	28	3.59	-0.56	0.98	29.5	9	8	13	10	nw.	Charles J. Bates.	
Jersey City.....	Hudson.....	10	17	33.0	-5.2	65	31	7	18	27	3.71	-0.39	0.94	26.7	15	8	11	12	nw.	S. K. Pearson, Jr.	
Lambertville.....	Hunterdon.....	80	29	34.2	-4.8	65	26†	8	18	27	2.83	-1.28	0.72	11.7	11	11	12	8	nw.	Samuel W. Cochran.	
Little Falls.....	Passaic.....	180	13	31.2 ^c	.....	.....	.....	.....	17	31	2.94	-1.05	0.84	24.0	10	.....	.....	.....	.....	Montclair Water Co.	
Newark.....	Essex.....	159	74	30.6	-6.9	67	31	4	18	26	2.28	-1.55	0.75	22.8	14	7	9	15	nw.	Prof. William Wiener.	
New Brunswick.....	Middlesex.....	110	63	31.2	-7.0	65	31	6	18	30	3.12	-0.79	0.63	15.5	11	14	9	8	nw.	N. J. Experiment Station.	
Palisades Park.....	Bergen.....	80	1	30.2	.....	62	30	3	18	29	3.75	.....	0.98	26.6	12	8	12	11	nw.	George P. Kirsten.	
Paterson.....	Passaic.....	80	45	32.7	-5.8	70	31	6	18	24	3.34	-0.89	1.09	27.5	14	6	17	8	ne.	Heber A. Probert.	
Plainfield.....	Union.....	100	30	31.8	-4.8	67	31	5	18	31	3.24	-0.57	0.84	22.9	13	12	8	11	ne.	John Neagle.	
Pompton Plains.....	Morris.....	195	14	.....	.....	.....	.....	.....	.....	.....	3.21	-0.83	0.84	28.5	13	.....	.....	.....	.....	M. S. Taylor	
Somerville.....	Somerset.....	60	34	30.6	-6.3	69	31	7	18	37	2.84	-1.11	0.64	16.5	11	11	11	9	nw.	A. A. Macdonald.	
South Orange.....	Essex.....	200	46	31.0	-5.8	65	31	5	18	29	2.96	-0.85	0.90	97.0	12	13	6	12	nw.	Dr. W. J. Chandler.	
New York, N. Y.....		365	46	32.2	-5.3	63	31	7	18	23	3.71	-0.39	0.96	25.5	15	8	13	10	nw.	U. S. Weather Bureau.	
Means and extremes.....				31.4	-5.9	71	31	3	18	37	3.15	-0.89	1.09	22.8	12	12	9	10	nw.		
<i>The Southern Interior.</i>																					
Bridgeton.....	Cumberland.....	30	35	35.8	-5.3	70	31	10	18	35	4.15	-0.32	1.75	8.0	10	14	4	13	w.	Henry A. Jorden.	
Burlington.....	Burlington.....	12	30	33.7	-6.2	68	31	7	18	34	3.51	-0.57	0.80	6.6	16	.....	.....	.....	.....	D. S. B. McCoy.	
Clayton.....	Gloucester.....	126	24	34.2	-5.6	69	26†	8	18	38	3.82	-0.16	1.51	7.1	9	16	7	8	nw.	George L. Wilson.	
Haddonfield.....	Camden.....	75	29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Chas. F. Richardson.	
Hammononton.....	Atlantic.....	103	15	.....	.....	.....	.....	.....	.....	.....	4.14	-0.23	1.55	5.7	11	15	6	10	ne.	Frederick H. Hoeffler.	
Hightstown.....	Mercer.....	140	24	31.0	-8.0	67	31	6	18	35	.....	.....	.....	.....	.....	12	12	7	nw.	Leon Dunbar.	
Inlaytown.....	Monmouth.....	185	28	30.6 ^a	-9.1	67	31	0	18	34	3.05	-1.14	.....	.....	.....	10	.....	.....	.....	H. E. Bullock.	
Indian Mills.....	Burlington.....	76	27	33.0	-6.8	68	26	5	18	38	4.76	+0.66	1.25	11.5	14	11	10	10	nw.	James M. Armstrong.	
Lakewood.....	Ocean.....	54	13	31.6	-8.4	65	26	6	18	37	3.97	-0.46	0.80	11.5	13	8	7	16	ne.	R. W. Holman.	
Moorestown.....	Burlington.....	75	54	33.5 ^a	-5.3	67	31	8	18	32 ^a	3.56	-0.25	0.90	10.0	11	8	14	9	nw.	Geo. L. Gillingham.	
Northfield.....	Atlantic.....	25	9	.....	.....	.....	.....	.....	.....	.....	4.13	.....	1.20	6.0	14	.....	.....	.....	.....	William L. Flick.	
Pleasantville.....	Atlantic.....	26	18													12	17	4	10		Lincoln Van Gilder.
Trenton.....	Mercer.....	190	45	32.2	-6.9	66	31	6	18	28	2.61	-1.43	0.70	9.0	13	10	7	14	nw.	U. S. Weather Bureau.	
Tuckerton.....	Ocean.....	23	23	32.9 ^a	-6.1	60	13	7	18	32 ^c	4.36	-0.03	.....	11.0	14	10	14	7	.....	Frank R. Austin.	
Vineland.....	Cumberland.....	87	48	34.6 ^a	-5.7	69	26†	8	18	37	3.30	-0.86	.....	.....	.....	12	.....	.....	.....	E. V. C. Hendricks.	
Woodbine.....	Cape May.....	43	25	35.0	-5.1	64	26	8	18	32	4.96	+0.88	1.63	4.6	15	15	4	12	nw.	Baron de Hirsch Agr. Sch.	
Philadelphia, Pa.....		117	46	35.4	-4.6	66	31	10	18	24	3.75	+0.30	1.42	9.3	12	10	8	13	nw.	U. S. Weather Bureau.	
Means and extremes.....				33.2	-6.5	70	31	0	18	38	3.88	-0.34	1.75	8.3	12	12	8	11	nw.		
<i>The Sea Coast.</i>																					
Asbury Park.....	Monmouth.....	22	27	31.6	-6.7	62	26	7	18	26	3.05	-1.25	0.52	16.0	15	16	5	10	w.	Wilbur H. Pancoast.	
Atlantic City.....	Atlantic.....	16	43	34.0	-4.8	59	13	9	18	22	4.41	+0.68	1.43	7.1	13	10	7	14	nw.	U. S. Weather Bureau.	
Cape May City.....	Cape May.....	17	32	35.3	-5.5	62	13	13	18	25	4.79	+1.06	2.02	10.3	13	9	12	10	nw.	U. S. Weather Bureau.	
Long Branch.....	Monmouth.....	25	9	31.5	.....	65	31	6	18	28	3.97	.....	0.99	21.5	15	12	8	11	nw.	William D. Martin, Jr.	
Sandy Hook.....	Monmouth.....	22	18	31.4	-5.3	58	31	9	18	21	3.66	-1.12	0.86	17.5	14	12	8	11	nw.	U. S. Weather Bureau.	
Means and extremes.....				32.8	-5.6	65	31	6	18	28	3.98	-0.16	2.02	14.5	14	12	8	11	nw.		
For the State.....				31.7	-6.3	71	31	-9	18	47	3.48	-0.57	2.02	19.3	12	13	8	10	nw.		

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

* Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Vineland is South Vineland.

Daily precipitation for March, 1916.

Stations.	Day of month.																															Total.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>The Highlands and Kittatinny Valley.</i>																																	
Slydère.....		.16				.92		.58					.07		.60						.14	.76							.54			3.77	
Charlotteburg.....						.90		.30		.07			*		.53	*					.17	.52										2.49	
Silver Lake.....		.23	T.	T.	.01	.68	.58	.38		.07		T.	.07	T.	.71	.06	T.		.01	.01	.15	.61	.07						*	T.		3.64	
Overton.....		.30				1.01		.45		.10			.05	*	.54						.15	.69								.27			3.56
Wayton.....		T.	.20		T.	T.	.54	.48	.44		.10		.03	T.	.78	.08				.02	.01	.12	.63	.01								3.44	
Newton.....		.18		T.	T.	.45	.32	.32		T.			.03		.55	.07			.01	T.	.19	.56	.02						.01			2.51	
Phillipsburg.....		.13				.64	.21	.39					.03	T.	.51	.03			.04		.09	.69	.02						.12	.45	.02	3.37	
Asses.....		.49				1.06		.31					.09		*	.95					.12	.77										3.79	
<i>The Red Sandstone Plain.</i>																																	
Wayone.....		.28				.60	.02	.31	T.	.07			.01		.45	.02			T.	T.	.05	.63	T.						T.	.20	T.		2.64
Argen Point.....		.30				.93	T.	.45		.01			T.		.50		T.	T.	T.		.07	.60	T.							.18			3.04
Monton.....		.16	T.		T.		.81	.08	.11	.09	T.		.03		.28	.21				.01	.01	.12	.16	.65					.06	.03		2.81	
Matham II.....		.27	.03			*	.83	.15	.38	T.	.03				.04	.68				.02		.10	.08	.56					.27	.04		3.48	
Elizabeth.....		.35	T.				1.08	.45		.15			.03	T.	.63		T.	.02	T.			.08	*	.72					.27	.02		3.80	
Remington.....		.20				.50	.38	.50		.02			.02	.03	.32	T.					.08	.26							.14	.47	.02	2.94	
Highwood.....		.21			T.	.88	.10	.52		.15			T.	T.	.68	T.	T.		.05		.07	.71	.02						.20	T.		3.59	
Rey City.....		.31	T.	T.	.01	.94		.47		.15			.01	.02	.62	.10	T.	.01		.08	.76								.06	.16		3.71	
Amberville**.....		.14				.32	.28	.22		.10			T.		.42	.21			.02		.04	.72							.15	.31		2.83	
Little Falls**.....		.18			T.	.79	T.	.34		.05		T.	T.	.02	.48	T.	T.	T.	T.		.07	.84	T.						.08	.09		2.94	
Newark**.....		.30	T.		T.	.75		.20		.18			.01	.02	.10	.20	T.	.01	.01		.20	.33							.04	.03		2.38	
ew Brunswick.....		.21		T.		.48	.39	.40		.05			T.		.40	.14			T.	T.	.07	.63	T.						T.	.33	.02	3.12	
Elisades Park.....		.29	T.		T.	.93	.05	.53		.15			.02	.03	.60	T.	T.	T.	T.		.09	.75	T.						.29	T.	.02	3.75	
erson.....		.23		T.	.01	.56	.53	.30		.10			.02	T.	.62	.04	T.	.01	T.		.10	.70	.02						.10	T.		3.34	
ainfield**.....		.30				.84		.30		.20			.01	.10	.18	.30	T.	T.			.10	.62							.14	.14	.01	3.24	
ompton Plains II.....		.21	T.			T.	.84	T.	.34	.06	T.		.07		.28	.42			T.	.04	.13	.12	.58						.10	.02		3.21	
omerville.....		.14				.47	.21	.28		.08					.51	.13			.01		.08	.64							.29	.21		2.84	
uth Orange.....		.20			T.	*	.90	.32		.11					.45		T.	.02			.07	.56	.10						T.	.21	.02	2.96	
ew York, N. Y.***.....		.29	T.		T.	.94	.02	.54		.14			.02	.07	.61	.02	T.	.02	.01	T.	.09	.69	T.						.13	.12	T.	3.71	
<i>The Southern Interior.</i>																																	
idgeton.....		.21	.12			.30		.25					.26	.12	T.						.06	1.05							1.75	.03		4.15	
irlington.....		.17	*	.03		.41	.12	.22		.05			*	.45	.01				.02		.03	.78	.02						.80	.40	T.	3.51	
ayton.....		.24	.12	.09		.27	.03	.26						.17	.03						.03	1.51							.78	.34		3.82	
addonfield.....																																	
ammonton.....		.24	.05			.18	T.	.28		T.					.48	T.	T.				.02	1.55	.01						.88	.41	.04	4.14	
ightstown§.....		\$.07				.06	.25	.35							*	.35					*	.32							.20	.20	.03	§	
laystown.....		.20				.10	.25	.20							.40	.10					*	.90							.30	.60		3.05	
dian Mills.....		.22	.18	.07		.12	.45	.54		T.			.12	.15	.21						.06	1.25	.05						.70	.64		4.76	
ekewood.....		.24	T.	.18		.35	.22	.54		T.			T.		.49	.12		T.	T.		.80	.05							.24	.70	.04	3.97	
orestown.....		.21	T.	.04		.21	.22	.24		T.					.41	T.			.06		.03	.90	T.						.79	.45		3.56	
orthfield.....		.21	.15	.07		.24	.06	.24		T.	T.		.01	.36	.02						.03	1.20							1.03	.48	.03	4.13	
asantville.....		.09	.49			.07	.01	.13		T.			.10	.10	.01						.06	1.28							\$.21	.10	T.	§	
enton***.....		.17	.02			.49	T.	.19	T.	.03			.16	.20	.01	T.	.01	T.	T.		.04	.70							T.	.44	.15	T.	2.61
ackerton.....		*	*	1.03		.40	*	.15		T.			*	*	.23						*	.98							*	*	* 1.47		4.36
eland.....		.21	*	.14		.06		.19		T.			*	*	.40				T.		*	1.06							.87	.37		3.30	
oodbine.....		.25	.05	.15		.03	.33	.25		T.	.40		.02	.40	.02						.15	.90							1.63	.30	.08	4.96	
hiladelphia, Pa.***.....		.18	.03			.47	T.	.22		T.			.27	.15	T.			.05			.04	.91							1.27	.15	.01	3.75	
<i>The Sea Coast.</i>																																	
Sbury Park**.....		.30	.20		T.	.12	.03	.35		.22		T.		.16	.16	.20	T.	.05			.05	.52							.39	.26	.04	3.65	
atlantic City***.....		.23	.40			.32	.01	.21		.01			.34	.09	T.	T.					.04	1.31							1.36	.08	.01	4.41	
ape May City***.....		.22	.62			.04	.02	.24		.02			.15	.14	.03						.15	1.09							1.98	.09		4.79	
ong Branch**.....		.30	T.		T.	.99	.02	.52		.12			.01	.03	.71	.01	T.	.01	.03	T.	.10	.76	T.						.19	.17	T.	3.97	
andy Hook***.....		.32	.03			.56	T.	.86		T.			.12	.45	.10	T.	.01	.01			.06	.68							.28	.16	.02	3.66	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24 hour period, midnight to midnight. † Separate dates of falls not recorded.

|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.

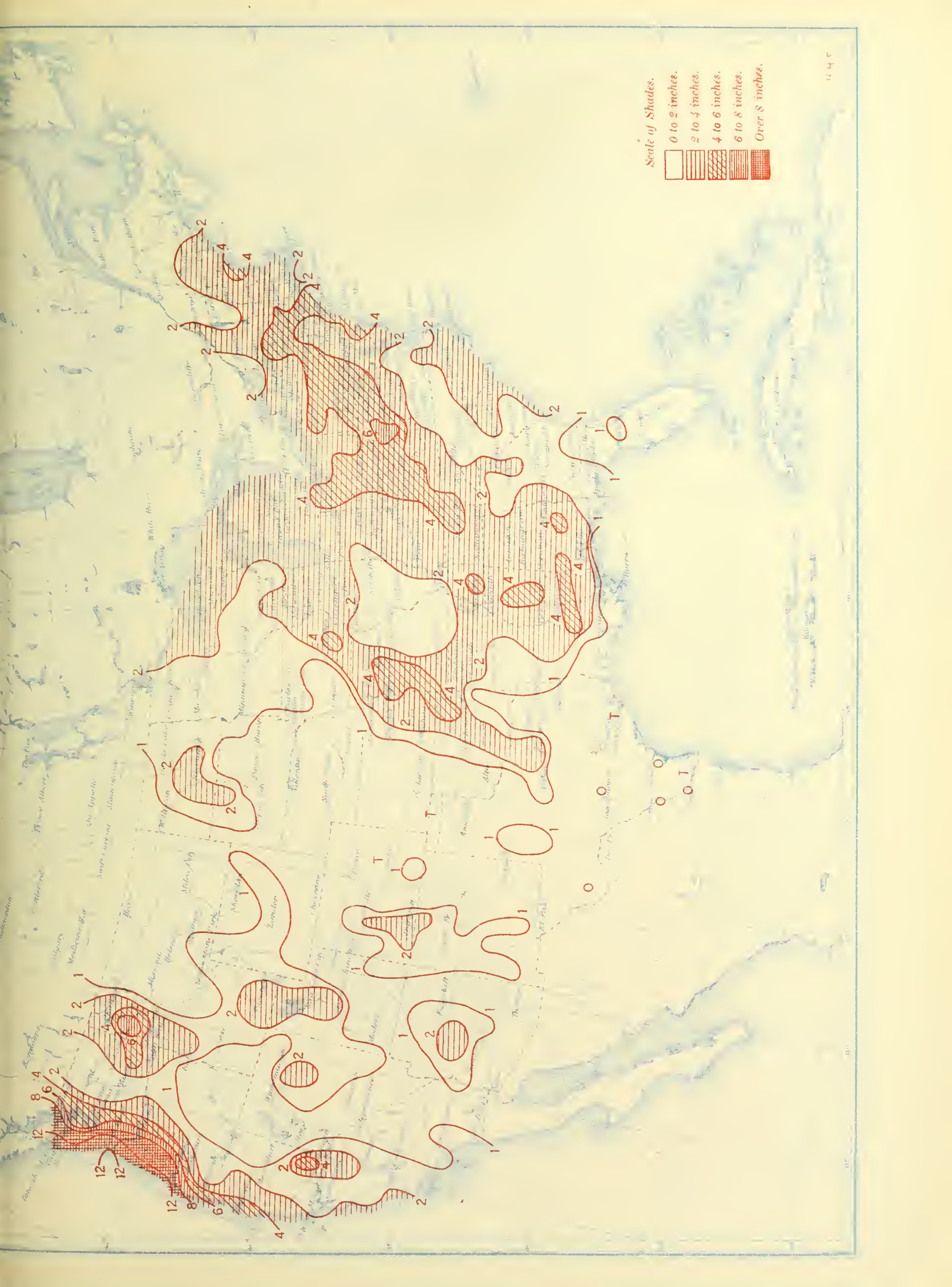
* Precipitation included in the next following measurement. ** Precipitation for 24 hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.			Moisture.		Sun- shine.	
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	Percentage of possible sunshine.
							Miles per hour.	Direction.	Date.			
Atlantic City.....	29.96	30.39	20	29.10	22	10	38	ne.	28	75	72	54
Asbury Park.....	29.96	30.40	20	29.27	22	12	48	nw.	4			
Cape May City.....	29.95	30.30	20	29.15	22							
Jersey City.....	29.95	30.36	20	29.19	22	18	60	nw.	5	76	69	54
Long Branch.....	29.93	30.34	20	29.15	22	20	64	nw.	5	*73	*66	44
Newark.....	29.96	30.40	20	29.13	22	12	37	nw.	5	66	56	62
New York, N. Y.....	29.93	30.37	20	29.14	22	19	52	nw.	4	65	65	51
Philadelphia, Pa.....	29.93	30.37	20	29.13	22	14	46	nw.	5	80	77	56
Sandy Hook.....	29.93	30.37	20	29.13	22	14	46	nw.	4	74	67	50
Trenton.....												

Daily temperature for March, 1916.

Stations.		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.
<i>The Highlands and Kittatinny Valley.</i>																																	
Belvidere.....	Maximum ...	39	35	35	39	31	25	45	41	32	41	35	39	51	41	32	31	28	28	38	37	44	37	41	35	60	56	47	45	63	70	41.4	
	Minimum ...	17	16	13	16	14	13	23	28	15	16	15	5	30	28	17	11	15	3	15	16	26	28	18	17	25	40	31	35	38	31	21.0	
Charlotteburg.....	Maximum ...	34	33	24	23	29	23	48	42	31	36	39	33	44	41	32	22	22	23	31	34	42	36	32	43	60	64	55	47	43	58	40.4	
	Minimum ...	10	21	11	12	14	9	11	22	15	16	14	7	27	21	12	9	12	-1	13	14	24	24	16	15	33	30	26	35	36	39	18.9	
Dover.....	Maximum ...	36	28	28	37	32	19	46	31	32	38	31	32	45	33	31	23	26	35	34	34	41	35	35	42	61	62	51	43	43	60	38.1	
	Minimum ...	14	22	12	14	12	10	20	24	15	19	12	7	29	26	15	9	15	1	15	16	24	27	18	16	30	29	29	36	38	...	19.4	
Layton.....	Maximum ...	35	30	30	25	20	21	50	36	32	40	31	34	44	36	31	23	21	24	33	37	40	36	34	49	60	59	53	46	43	61	38.4	
	Minimum ...	11	14	4	13	10	5	12	20	16	15	12	-4	29	20	18	8	10	-7	13	10	24	25	14	2	20	23	25	30	85	34	15.8	
Newton.....	Maximum ...	42	31	29	27	28	23	42	40	29	38	33	33	43	34	30	22	21	21	31	31	39	34	30	39	55	50	52	50	41	59	36.7	
	Minimum ...	10	18	9	10	10	9	11	25	10	18	13	10	28	25	12	7	10	-2	13	13	23	26	17	12	21	29	30	35	36	37	18.3	
Phillipsburg.....	Maximum ...	38	34	29	28	32	27	49	45	34	40	35	39	51	40	32	27	26	24	35	35	42	38	37	39	59	59	54	46	43	63	40.3	
	Minimum ...	21	23	14	15	19	16	20	28	16	22	17	11	31	29	17	11	15	4	15	17	26	28	20	19	29	31	33	37	36	38	22.4	
Sussex.....	Maximum ...	36	27	23	24	28	21	43	36	31	40	29	36	44	36	31	23	23	25	34	37	41	35	33	47	50	50	53	46	41	58	37.0	
	Minimum ...	14	18	11	13	14	9	17	24	11	18	11	9	30	22	13	9	10	0	14	14	24	25	16	13	26	27	27	33	37	36	18.6	
<i>The Red Sandstone Plain.</i>																																	
Bayonne.....	Maximum ...	37	33	33	29	35	28	38	34	31	41	33	35	49	37	34	27	30	26	35	34	39	36	38	40	52	59	52	43	46	62	39.0	
	Minimum ...	23	26	19	18	19	16	25	24	18	23	18	16	31	30	17	15	11	6	20	19	27	28	22	20	31	32	34	37	39	41	24.1	
Bergen Point.....	Maximum ...	38	34	32	34	35	30	41	35	33	42	35	38	50	37	35	28	28	27	37	36	40	37	38	42	58	60	58	44	45	60	40.4	
	Minimum ...	20	26	16	16	20	16	22	29	17	20	18	14	30	29	16	14	11	5	19	19	26	28	21	19	29	30	31	26	36	40	22.3	
Boonton§§.....	Maximum ...	37	27	32	28	32	27	40	35	36	41	31	39	42	36	28	24	28	25	37	35	42	32	36	44	57	57	51	44	46	62	38.7	
	Minimum ...	12	23	10	15	15	10	11	23	11	15	17	4	17	25	24	12	12	4	9	17	20	21	20	16	24	28	28	33	37	40	19.1	
Elizabeth.....	Maximum ...	40	32	34	30	35	24	42	40	34	43	39	52	45	36	30	29	28	37	36	43	41	39	44	59	65	56	47	46	65	69	41.9	
	Minimum ...	18	26	15	17	16	14	21	28	17	19	18	9	31	28	19	15	16	4	19	18	27	28	20	18	28	29	30	36	39	40	22.5	
Flemington.....	Maximum ...	41	33	30	31	35	30	45	40	35	41	38	39	54	42	33	28	29	27	39	...	45	37	41	42	59	66	53	46	45	62	71	41.9*
	Minimum ...	21	26	15	17	19	15	21	26	16	18	17	10	32	29	20	12	16	5	16	...	...	29	22	20	29	30	33	35	38	41	41	22.9*
Highwood.....	Maximum ...	35	29	29	28	33	33	37	33	32	41	32	36	46	36	33	25	26	25	35	35	39	35	35	42	52	54	52	43	45	60	38.1	
	Minimum ...	15	24	13	17	18	8	21	28	17	16	16	...	31	23	14	14	10	4	15	17	26	16	14	26	26	28	34	36	40	38	21.0*	
Jersey City.....	Maximum ...	38	33	33	29	36	24	38	35	32	40	35	36	51	40	36	28	29	24	38	36	40	38	39	43	60	63	55	46	48	62	40.3	
	Minimum ...	25	27	20	18	21	17	24	30	18	27	20	29	32	32	17	15	14	7	21	20	28	29	23	20	33	36	38	39	38	42	41	25.6
Lambertville.....	Maximum ...	40	39	35	31	34	34	44	43	35	42	38	39	51	42	38	30	29	25	36	36	43	43	36	41	59	65	63	56	45	62	42.5	
	Minimum ...	23	29	17	18	21	19	22	30	18	27	21	17	35	33	25	14	19	8	19	20	28	32	23	21	32	34	36	38	38	42	25.8	
Little Falls.....	Maximum ...	36	32	33	33	34	27	...	37	...	44	37	40	47	40	36	31	27	24	35	38	43	36	37	45	59	54	...	48	45	...	38.5*	
	Minimum ...	17	26	17	23	18	17	25	26	19	24	17	22	32	28	16	15	8	15	18	18	28	22	19	28	...	38	37	37	37	37	23.9*	
Newark.....	Maximum ...	37	31	29	26	32	24	37	39	30	39	30	32	48	36	30	22	22	20	33	34	41	36	36	41	59	62	55	41	45	60	37.6	
	Minimum ...	24	25	19	17	20	17	23	25	15	22	18	19	29	28	15	13	7	4	17	18	27	28	22	20	35	36	36	37	38	40	23.7	
New Brunswick.....	Maximum ...	36	34	29	28	34	27	42	41	40	41	37	37	48	46	35	25	25	22	35	33	39	40	36	40	56	62	55	47	45	61	39.7	
	Minimum ...	22	26	15	12	12	15	21	27	11	21	17	13	30	30	17	12	15	6	18	19	26	28	22	20	31	32	34	36	38	40	22.7	
Palisades Park.....	Maximum ...	37	28	29	28	32	23	40	33	33	41	34	38	50	35	33	26	26	25	35	34	40	35	37	42	55	59	53	44	45	62	41.8	
	Minimum ...	18	24	12	18	19	10	19	28	17	20	16	11	32	25	13	14	11	3	18	15	27	27	21	14	28	30	30	35	38	40	21.9	
Paterson.....	Maximum ...	39	33	31	30	36	25	40	36	36	42	39	38	51	42	35	30	30	26	38	38	41	36	40	47	60	65	57	50	45	64	41.6	
	Minimum ...	21	24	19	18	19	15	19	28	18	23	19	15	31	29	18	15	16	6	19	19	27	29	22	19	31	31	32	36	39	42	23.8	
Plainfield.....	Maximum ...	38	32	32	30	36	25	41	36	33	42	37	39	51	39	34	28	30	26	38	34	42	35	39	42	59	59	53	42	46	63	40.3	
	Minimum ...	18	26	17	18	17	16	21	29	17	19	18	9	30	29	20	14	13	5	18	15	26	28	21	19	28	32	34	37	39	41	23.2	
Somerville.....	Maximum ...	39	32	29	29	35	31	42	35	32	41	37	37	49	40	35	22	27	27	37	38	41	39	38	40	59	64	53	47	46	63	39.9	
	Minimum ...	14	25	12	16	19	13	20	23																								



Scale of Shades.



UNIVERSITY OF ILLINOIS
URBANA

NJ

Stack

U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU

CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

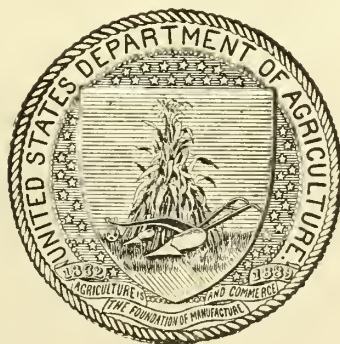
NEW JERSEY SECTION

APRIL, 1916.

BY

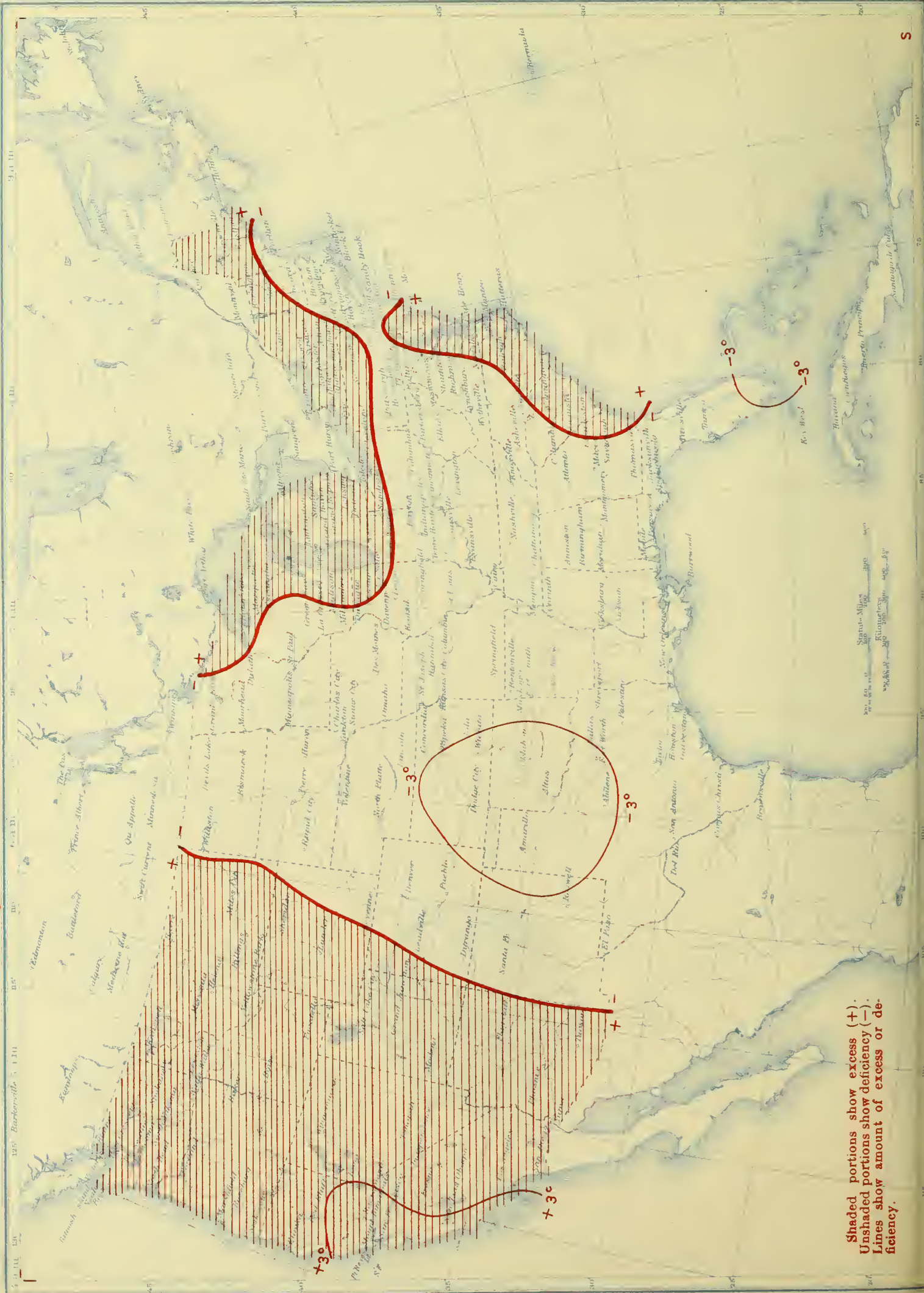
G. HAROLD NOYES

SECTION DIRECTOR



TRENTON, N. J.
WEATHER BUREAU OFFICE
MAY 18, 1916.

Departure of the Mean Temperature from the Normal, April, 1916.



Shaded portions show excess (+).
Unshaded portions show deficiency (-).
Lines show amount of excess or deficiency.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Section Director.

VOL. XXIX. TRENTON, N. J., APRIL, 1916. No. 4.

GENERAL SUMMARY.

The weather of April, 1916, in New Jersey was a somewhat unfavorable contrast with that of a year ago. The temperature was somewhat below normal, which, added to the almost unprecedented cold of March, was conducive to a very backward spring, and agriculture was retarded some two weeks. Conditions would doubtless have been much more disagreeable, except that there was less precipitation than normal, although its occurrence was above normal in frequency. The 8th and 9th was marked by the final snowstorm of the season, which was general throughout the State, except in Cape May County. The greatest depth of snow was 12.7 inches, and the average depth 4.4 inches, which was over 3 inches deeper than the April normal. Cloudiness was excessive and altogether the weather was generally unpleasant. The largest amount of precipitation and greatest frequency of occurrence was in the northern third of the State, and this area agrees approximately with the region of lowest temperature. The central and southern counties were distinctly subnormal in moisture. As weather comparisons are ordinarily made from memory they are likely to be faulty, for it is the extraordinary feature and not the day to day medium condition which produces the mental impression. Therefore, before making an invidious comparison between this April and that of last year, it should be taken into consideration that April of last year was the warmest on record, and decidedly more than ordinarily dry.

The mean daily stage of the Delaware River at Phillipsburg was 7.9 feet, the highest stage being 14.9 feet on the 1st and 3d. At Trenton, the mean stage for the month was 5.1 feet, which was 1.1 feet above normal; the highest water was 9.4 feet on the 3d.

Storm warnings were displayed along the coast on the 4th, 11th, and 14th.

TEMPERATURE.

The monthly mean temperature of the State, as deduced from observations of 38 stations, was 48.2°, which was 0.7° below normal. Variations from normal were not remarkably great at any period, but the middle decade was consistently warm. The highest temperature was 85° at Vineland on the 21st, and the lowest, 20°, at Culvers Lake on the 11th. The highest mean temperature was 51.8° at Bridgeton, and the lowest, 45.8°, at Charlotteburg. The greatest daily range of temperature was 4° at Vineland on the 30th.

PRECIPITATION.

The average precipitation of the State, as deduced from observations of 46 stations, was 3.32 inches, which was 0.19 inch below normal. The greatest monthly amount was 6.14 inches at Chatham, and the least, 0.90 inch at Pleasantville. The great-

est amount in 24 consecutive hours was 1.83 inches at Jersey City on the 14th, and was attendant upon the low pressure passing at that time. The average depth of snow was 4.4 inches, which was 3.2 inches above normal. The greatest snowfall was 12.7 inches at Culvers Lake, while at Woodbine and Cape May City there was no snow. The snow occurred on the 8th-9th. Rain occurred with unusual frequency during April, being almost daily through the 9th, and on the 12th, 13th, 14th, 17th, and from the 22d through the 27th, and 28th in northern counties. The average number of days throughout the State on which 0.01 inch or more precipitation occurred was 13, which was 3 more than normal.

WIND.

The prevailing wind direction was from the northwest, with an approximate velocity of 12 miles per hour, which was about normal. The highest velocity, sustained for 5 consecutive minutes, was 76 miles per hour from the northwest on the 18th. High winds also occurred on the 12th, 14th, and 15th.

SUNSHINE AND CLOUDINESS.

The average number of clear days was 10, partly cloudy, 9, which was 1 less each than normal, and cloudy, 11, which was 2 more than normal. The approximate percentage of possible sunshine averaged 53, which was slightly less than normal.

COMPARATIVE DATA FOR APRIL.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	of inch or more prec.
1885.....	48.4	88	26	2.79	2.86	0.89	.....	.....	.....	.....
1886.....	50.6	86	27	3.40	5.48	1.86	.....	.....	.....	.....
1887.....	47.3	87	16	2.70	3.77	0.91	.....	.....	.....	.....
1888.....	47.9	82	22	3.28	4.68	1.89	.....	.....	.....	.....
1889.....	51.2	83	25	5.32	7.25	2.92	.....	.....	.....	.....
1890.....	50.4	86	21	2.65	4.58	1.89	.....	.....	.....	.....
1891.....	52.0	88	20	2.19	3.80	1.39	13	11	6	8
1892.....	49.3	87	19	2.49	4.41	1.05	9	13	8	8
1893.....	49.2	82	19	5.21	7.12	2.97	9	10	12	11
1894.....	50.3	88	19	3.09	4.86	1.71	12	9	9	9
1895.....	49.1	89	19	4.88	7.75	3.47	11	7	12	10
1896.....	52.4	88	12	1.35	2.80	0.64	13	10	7	7
1897.....	50.4	89	19	3.79	6.98	2.17	14	11	5	9
1898.....	47.8	87	13	3.74	4.94	2.17	8	11	11	11
1899.....	49.9	88	18	1.73	3.25	0.48	16	10	4	4
1900.....	50.8	82	18	2.29	3.03	1.59	14	9	7	6
1901.....	48.3	89	23	6.31	10.22	3.46	8	7	15	12
1902.....	50.2	93	20	3.62	5.99	2.45	10	11	9	9
1903.....	50.9	92	18	3.97	7.03	2.40	13	7	10	9
1904.....	46.7	85	16	3.42	4.71	2.00	9	12	9	10
1905.....	49.9	84	18	2.88	4.03	1.53	12	11	7	10
1906.....	51.2	87	17	3.64	6.42	1.17	15	10	5	8
1907.....	45.2	83	19	3.78	8.67	2.06	11	9	10	11
1908.....	51.2	93	13	2.72	3.86	1.42	14	9	7	11
1909.....	50.2	88	17	5.97	8.90	3.84	10	11	9	13
1910.....	53.5	88	20	5.34	7.56	3.43	9	11	10	12
1911.....	47.4	88	14	4.11	5.58	2.87	10	10	10	11
1912.....	50.4	82	18	3.56	6.02	1.81	9	10	11	14
1913.....	52.1	89	19	5.78	8.53	4.14	14	7	9	11
1914.....	48.4	89	15	3.68	4.78	2.35	13	10	7	11
1915.....	54.4	96	20	2.71	4.13	1.28	14	10	6	9
1916.....	48.2	85	20	3.32	6.14	0.90	10	9	11	13

ERRATA.

1914, Annual.—Page 100, Comparative State data, 1887, highest temperature, 101°, should read 102°; Monthly State data, February, mean temperature, 25.5°, should read 25.9°, and departure, 4.5°, should read 4.4°. Page 101, Somerville, precipitation, greatest monthly, 5.57, should read 5.67; South Orange, temperature, highest, 63°, should read 93°.

March, 1915.—Page 22, Highwood, on the 9th, minimum temperature, 20°, should read 23°; mean temperature, 24.8°, should read 24.9°. Atlantic City, mean maximum temperature 54.9°, should read 44.9°. Page 19, comparative data for March, 1915, should read 36.1, 63, 6, 1.13, 1.65, 0.58.

April, 1915.—Page 28, Charlotteburg, lowest temperature, 31°, should read 21°; Boonton, lowest temperature, 28° on the 3d, should read 24° on the 2d; Hightstown, total precipitation, 2.49, should read 3.49. Page 30, Phillipsburg, on the 22d, maximum temperature, 15°, should read 65°.

Climatological data for April, 1916.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.							Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation .01 in. or more.	Clear.	Pt. cloudy.	Cloudy.		
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	25	49.0	-0.6	80	30	27	11	38	4.04	+0.77	.....	4.0	12	16	1	13	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	24	45.8 ^b	-0.9	75	30	21	11	41	3.08	-0.85	0.75	8.0	14	13	9	8	w.	George S. Briggs.
Culvers Lake ^{††}	Sussex.....	848	15	.....	.....	.....	.....	20	11	.....	4.35	+0.48	0.96	12.7	16	14	6	10	e.	Brice E. Riker.
Dover.....	Morris.....	600	32	46.2	-1.1	77	30	25	11	39	4.24	+0.73	1.33	7.5	14	2	15	13	.....	William C. Harris.
Layton.....	Sussex.....	480	16	46.8	+0.3	78	30	24	11	43	4.96	+1.65	1.01	10.5	19	12	5	13	nw.	A. M. Depue.
Newton.....	Sussex.....	769	35	46.4	-1.2	75	30	29	9 [†]	31	3.43	+0.22	1.15	8.0	17	7	20 [†]	3	ne.	Irving G. Kern.
Phillipsburg.....	Warren.....	363	34	49.4	-0.2	77	30	31	8 [†]	35	4.04	+1.02	1.76	8.5	16	14	5	11	nw.	D. Wilson Smith.
Sussex.....	Sussex.....	442	26	46.6 ^a	-1.7	.....	.....	28	11	33 ^c	3.50	+0.25	0.93	3.0	11	.....	.....	.....	ne.	George Dymock.
Means and extremes...				47.2	-0.8	80	30	20	11	43	3.96	+0.53	1.76	7.8	15	11	9	10	nw.	
<i>The Red Sandstone Plain.</i>																				
Bayonne.....	Hudson.....	50	26	47.8	-1.2	71	29	32	9	30	3.90	+0.22	1.45	.....	13	.....	.....	.....	nw.	Ersline R. Eadie.
Bergen Point ^{††}	Hudson.....	37	19	48.0 ^b	-0.5	71	30	31	9	33	4.67	+0.78	1.52	2.0	7	9	13	8	se.	William H. Mitchell.
Boonton.....	Morris.....	400	26	46.8	.....	76	30	21	11	38	2.85	-0.91	0.61	5.0	15	16	2	12	ne.	J. W. Demmers.
Chatham.....	Morris.....	330	14	.....	.....	.....	.....	.....	.....	.....	6.14	+2.49	1.20	4.0	16	13	4	13	.....	Miss M. A. Butler.
Elizabeth.....	Union.....	45	37	49.0	-1.8	74	30	29	11	35	4.41	+0.84	1.45	3.0	15	5	12	13	nw.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	28	49.4	+0.3	79	30	32	8 [†]	38	3.04	-0.40	1.06	7.0	15	14	3	13	w.	Hiram E. Deats.
Highwood.....	Bergen.....	90	27	47.0	-1.5	71	30	28	11	33	3.64	+0.25	1.24	4.0	15	5	14	11	nw.	Charles J. Bates.
Jersey City.....	Hudson.....	10	17	48.8	-0.6	72	29	32	9	29	4.29	+0.59	1.83	2.1	14	8	8	14	nw.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	29	50.5	+0.1	74	30	33	11	30	3.42	+0.02	0.72	.....	16	10	12	8	nw.	Samuel W. Cochran.
Little Falls.....	Passaic.....	180	13	.....	.....	.....	.....	.....	.....	.....	4.26	+0.72	1.39	.....	15	10	3	17	w.	Montclair Water Co.
Newark.....	Essex.....	159	74	47.6	-1.5	71	30	30	9	27	3.40	-0.33	1.25	7.0	13	8	8	14	nw.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	110	63	48.4	-1.3	70	30	31	9	29	3.52	-0.27	1.17	8.0	13	14	10	6	e.	N. J. Experiment Station.
Palisades Park.....	Bergen.....	80	1	46.8	.....	71	29	31	11	32	3.68	.....	1.32	4.0	16	12	5	13	nw.	George P. Kirsten.
Paterson.....	Passaic.....	80	45	49.4	-0.9	77	30	31	11	34	4.02	+0.53	1.46	3.2	12	4	17	9	nw.	Heber A. Probert.
Plainfield.....	Union.....	100	30	48.6	+0.4	74	30	28	11	34	3.37	-0.53	1.67	2.8	15	9	5	16	sw.	John Neagle.
Pompton Plains.....	Morris.....	195	14	.....	.....	.....	.....	.....	.....	.....	3.93	+0.37	0.78	4.0	15	.....	.....	.....	.....	M. S. Taylor
Somerville.....	Somerset.....	60	34	47.7	-1.0	74	30	24	11	38	3.71	+0.16	1.38	2.5	12	6	10	14	ne.	A. A. Macdonald.
South Orange.....	Essex.....	200	46	47.8	+0.5	69	30	33	8 [†]	28	3.80	+0.31	1.43	8.0	12	9	7	14	nw.	Dr. W. J. Chandler.
New York, N. Y.....		365	46	47.1	-1.0	69	30	30	9	26	3.28	-0.02	1.37	3.3	14	6	9	15	nw.	U. S. Weather Bureau.
Means and extremes...				48.2	-0.7	79	30	21	11	38	3.89	+0.28	1.83	4.4	14	9	9	12	nw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	35	51.8	0.0	79	21	30	7	35	2.52	-0.91	0.78	T.	9	12	8	10	w.	Henry A. Jorden.
Burlington.....	Burlington.....	12	30	50.8	-0.3	78	30	32	7 [†]	35	3.67	+0.30	0.85	4.5	13	.....	.....	.....	nw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	24	.....	.....	.....	.....	29	7 [†]		1.58	-1.56	0.45	4.7	12	16	6	8	.....	George L. Wilson.
Haddonfield.....	Camden.....	75	29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	ne.	Prof. Chas. F. Richardson.
Hammonton.....	Atlantic.....	103	15	.....	.....	.....	.....	.....	.....	.....	2.11	-1.73	0.70	3.0	13	14	7	9	.....	Frederick H. Hoeffer.
Hightstown.....	Mercer.....	140	24	48.4 ^b	-1.4	75	30	30	7	37 ^c	2.64	-1.27	0.81	.....	11	16	3	11	nw	Leon Dunbar.
Imlaystown.....	Monmouth.....	185	28	47.5	-3.1	70	16 [†]	27	7	38	3.45	-0.05	1.10	3.0	10	7	11	12	se.	H. E. Bullock.
Indian Mills.....	Burlington.....	76	27	48.9	-1.4	84	21	27	11	42	2.76	-0.37	0.75	4.5	11	10	9	11	nw.	James M. Armstrong.
Lakewood.....	Ocean.....	54	13	47.3	-2.4	69	30	27	7	38	3.02	-0.71	1.05	4.0	11	5	9	16	.....	R. W. Holman.
Moorestown.....	Burlington.....	75	54	50.8	+0.8	80	21	32	7 [†]	36	3.56	+0.37	0.90	9.0	12	11	12	7	nw.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	9	.....	.....	.....	.....	.....	.....	.....	1.80	.....	0.47	0.7	12	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	18	.....	.....	.....	.....	.....	.....	.....	0.90	-2.62	0.24	.....	10	.....	.....	.....	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	45	48.8	-1.0	76	30	32	9	30	2.67	-0.62	0.88	5.4	15	6	5	19	nw.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	23	48.5 ^b	+0.6	.....	.....	30	7 [†]	30 ^c	2.61	-1.18	.....	2.0	9	10	11	9	ne.	Frank R. Austin.
Vineland ^{††}	Cumberland.....	87	48	50.6 ^b	-0.1	85	21	28	7	44	2.10	-1.24	0.70	1.8	11	.....	.....	.....	.....	E. V. C. Hendricks.
Woodbine.....	Cape May.....	43	25	50.8 ^a	+1.3	80	21	30	8	39	3.12	-0.46	0.75	0	11	.....	.....	.....	.....	Baron de Hirsch Agr. Sch.
Philadelphia, Pa.....		117	46	51.4	+0.6	78	21	32	8	32	2.97	+0.06	0.95	5.1	12	7	8	15	nw.	U. S. Weather Bureau.
Means and extremes...				49.5	-0.6	85	21	27	7 [†]	44	2.57	-0.86	1.10	3.3	11	11	8	11	nw.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	27	45.8	-2.3	63	17 [†]	32	9	22	1.64	-2.03	0.56	2.5	11	11	13	6	w.	Wilbur H. Pancoast.
Atlantic City.....	Atlantic.....	16	43	47.2	-0.4	64	14	33	7	24	1.85	-1.14	0.55	0.1	13	5	8	17	nw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	32	49.4	+1.0	67	29	36	9	22	1.84	-1.15	0.34	0	15	8	14	8	nw.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	9	46.9	.....	70	30	29	9	27	3.49	.....	1.47	3.1	15	8	7	15	nw.	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	18	45.8	-0.9	63	29	32	9	20	3.47	-0.82	1.81	3.4	15	6	9	15	nw.	U. S. Weather Bureau.
Means and extremes...				47.0	-0.6	70	30	29	9	27	2.46	-1.28	1.81	1.8	14	8	10	12	nw.	
For the State.....				48.2	-0.7	85	21	20	11	44	3.32	-0.19	1.83	4.4	13	10	9	11	nw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

* Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Vineland is South Vineland.

Daily precipitation for April, 1916.

Stations.	Day of month.																															Total.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>The Highlands and Kittatinny Valley.</i>																																	
Belvidere.....		.06				*		*	.98				*	1.36			.03						.57	.01		.28	*	.75					4.04
Charlotteburg.....			.05		.15			*	.55				.40	.38			.05					.75	.10		T	*	.65						3.04
Culvers Lake.....		.03	.02		T	.07	.47	.42			.04	.42	.96				T			.02		.47	.10	.15	.01	.04	.96	.17					4.35
Dover.....			.07		.13			*	.75				.50	1.33			.07					*	.75		.07	*	.55	.02					4.24
Layton.....		.07	.01	.03	T	.14	.52	.59			.03	.49	1.01				.07				.11	.17	.23	.12	.03	.06	.30	.90	.08				4.96
Newton.....		.03		.02			.07	.22	.20		T	.55	1.15	.01			.02	.02		.01		.20	.03	.01	T	.07	.75	.07					3.43
Phillipsburg.....		.01			T		.01	.51	.21			.08	.02	1.76	.02		.02					.55	.03	.01	.02	.05	.49	.25					4.04
Russess.....					.05		.20	.38				.10	.28	.93								.54	.06			.19	.70	.07					3.50
<i>The Red Sandstone Plain.</i>																																	
Bayonne.....				.07	T	T	.01	.30	.34				.30	1.45	T		.06					.90	.23	.02	T	.09	.12	.01					3.90
Bergen Point.....		T				T		1.03	.30			T	.22	1.52								.84	.20	T	T	.56							4.67
Boonton.....		.01	.03	.01		.05	T	.60					.40	.24	.39		T	.06				.01	.61	.10	T	.05	.21	.08	T				2.85
Chatham II.....		.03	.02	.03		.08	T	.70	.03				.23	.68	1.20			.08				.85	.97	.07		.20	.42	.55					6.14
Elizabeth.....		.03		.06		.05		*	.95		.02		.23	1.45			.10					.91	.21		.05	.17		.18					4.41
Flemington.....			.05		.10	.52	.22			.10	.02	1.06				.09						.35	.02	.04	.02	.15	.26	.04					3.04
Highwood.....		.01	.15	T	T	.13	.73	.27				.32	1.24			.10				T		.37	.04	.01	.01	.08	.11	.07					3.64
Jersey City**.....		.03	.07		.03		.30	.45				.24	1.83			.06	T			T		.97	.10	T	.01	.07	.11	.02					4.29
Lambertville.....		.02	.03			.05	.52	.72		.10	.01	.59				.19						.59	.02	.18	.03	.05	.24	.08					3.42
Little Falls**.....		.01	T	.12		.10		.85	.36		T		.30	1.39			.08				.03	.59	.08	T	.08	.06	.18	.03					4.26
Newark**.....		T		.03		.03	.47	.23		T		.24	1.25			.04						.80	.14		.04	.01	.11	.01					3.40
New Brunswick.....		.03		T	.13	.05	.67	.65			.04	.02	1.17	T		.07						.14	.05	.12	T	.44	.07	T					3.52
Palisades Park.....		.02	T	.09	.02	.09	.73	.27				.26	1.32			.11	T					.30	.05	.03	.01	.05	.22	.11					3.68
Paterson.....		T	.13	.06		.65	.18				T	.28	1.46			.06	T		T			.90	.04	T	T	.05	.20	.01					4.02
Plainfield**.....		.02		.02		.04	.75	.05		.02		.03	1.67			.08					.01	.45	.16		.01	.03	.03						3.37
Pompton Plains II.....			T	.04		.13		.76	.08			.34	.78	.47			.06					.03	.58	T	.04	.03	.36	.21	.02				3.93
Romerville.....			.03		.07	.53	.32			.03		.18	1.38			.16						.32	T	.12	T	.28	.29						3.71
South Orange.....			*	.04	T	.02	.50	.32				.26	1.43			.02						.65	.22	T	T	.12	.22	T					3.80
New York, N. Y.***.....		.02	.05		.03		.53	.19		T	T	.22	1.37			.04	T					.44	.08	T	.04	.10	.09	.08					3.28
<i>The Southern Interior.</i>																																	
Bridgeton.....		T	.05			T	T	.78	.15				.18			.45					.57	T	.08		.08	T	.18						2.52
Burlington.....			T			.16	.85	.48		.02			.81			.05						.68	.03	.05	.29	*	.15	.10					3.67
Layton.....		.01		.02	.02	.44	.29				.06		.06			.14						.45	.02		.06		.01						1.58
Ladonfield.....		T		.10		.05	.08	.70	.20			.06	T	.25			.15					.17	.01	.01	.28	T	.05						2.11
Lammonton.....				.05			.08	.62	.40		T		.81			.05						.19		.14	.10	.05	.15	T					2.64
Lightstown.....			.05		*		.90	.60					1.10			.10						.15	T		*	.35	.20						3.45
Maytown.....			.08		.09		.75	.37			.04		.20			.25						.44	.06		.36		.12	T					2.76
Indian Mills.....			.12	.03		1.05	.25				T	1.05				.10						.05	.02	.05	.25	.05							3.02
Blackwood.....			.05		.04		.81	.33		.01		.71				.10						.90	T	.08	.39	.04	.10						3.56
Moorestown.....				.27	.05	.10	.47	.11			.06		.04			.44	.02					.01		.17	.06								1.80
Northfield.....		.01	.14	.06	.10	.24	.05				T		T			.09						.02	.02	.17		.02							0.90
Leasantville.....		.01	.02	T	.06		.45	.33		T	.07	T	.88			.03			.32	.05	.08		.10	.05	.18	.04							2.67
Paterson**.....		T	.55		.07	*	.85					.41				.26						.04		.30		.13							2.61
Rocky Hill.....		T	.03		.07		.70	.11			.11		.13			.14						.53	.03		.16		.09						2.10
Woodbine.....		.75	.13		.17		.59	.16					.60			*	.28					.16		.19		.09							3.12
Philadelphia, Pa.***.....		T	.01		.05		.91	.24		T	T	T	.41			.11						.06	.01		.30		.15	.01					2.97
<i>The Sea Coast.</i>																																	
Asbury Park**.....			.03	.03			.56	.25		T		T	.45		T	.08					T		.08	.01	.12	.02	.01						1.64
Atlantic City***.....		T	.16	.31		.08	.53	.07		.02	.08	T	.03			.28					T	.03	.02		.20		.04						1.85
Long Branch***.....			.14	.05		.14	.14	.04		.01	.04		.10			.17						.03	T		.33	.03	.34	.10					1.84
Long Branch**.....		.02	.01	.04		.02	.57	.21			T	.26	1.47			.01	T					.50	.07	T	.03	.11	.07	.10					3.49
Long Branch*.....		.01	.01	.02		.03	.59	.37		T	.03	.07	1.81			.03						.32	.11	T	.03	.04	.02						3.47

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded.

|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.

* Precipitation included in the next following measurement. **Precipitation for 24-hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.			Moisture.		Sun- shine	
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.		Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.		
							Miles per hour.	Direction.				Date.
Atlantic City.....	29.96	30.33	11	29.36	14	9	34	nw.	14	76	72	53
Asbury Park.....	29.97	30.34	11	29.58	9	10	50	nw.	15			
Atlantic May City.....	29.95	30.26	16	29.33	14	15	76	nw.	18	76	69	56
Long Branch.....	29.93	30.28	16	29.34	14	6	48	w.	14	73	62	
Newark.....	29.92	30.25	16	29.30	14	17	72	nw.	18	69	62	53
New York, N. Y.....	29.93	30.28	16	29.34	14							
Malisade Park.....	29.92	30.25	16	29.30	14							
Philadelphia, Pa.....	29.95	30.33	16	29.38	14	12	42	nw.	14	68	62	50
Andy Hook.....	29.93	30.31	16	29.30	14	16	59	nw.	14	73	82	51
Porton.....	29.93	30.28	16	29.33	14	13	52	nw.	14	74	64	56

Daily temperature for April, 1916.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.	
<i>The Highlands and Kittatinny Valley.</i>																																	
Belvidere.....	Maximum	68	59	55	44	63	53	55	41	45	54	62	60	58	57	65	68	63	59	65	68	74	52	50	59	59	68	56	58	74	80	59.7	
	Minimum	34	42	34	35	32	38	33	32	31	34	27	43	42	42	38	32	42	40	38	41	46	44	42	43	43	42	40	38	36	42	38.2	
Charlotteburg.....	Maximum	65	61	.....	.....	54	54	45	45	39	46	57	56	51	49	59	66	53	61	64	59	53	53	52	.....	41	41	37	38	38	34	36.0	
	Minimum	32	42	.....	31	33	32	32	30	29	32	21	42	39	38	35	34	40	42	36	38	40	38	39	41	41	41	41	41	41	41	55.7 ^a	
Dover.....	Maximum	64	55	49	39	59	47	49	37	38	49	60	58	48	54	61	67	58	53	61	66	71	60	50	58	51	64	48	54	70	77	37.4	
	Minimum	35	36	32	33	35	36	31	31	35	31	25	43	40	39	37	33	43	40	37	40	43	39	41	40	42	43	41	41	41	38	57.7	
Layton.....	Maximum	65	59	59	46	58	55	51	46	44	50	60	56	49	54	61	67	58	53	61	66	71	60	50	58	54	66	50	56	70	78	35.8	
	Minimum	30	29	31	34	32	30	30	31	29	30	31	24	43	37	41	36	29	42	40	35	37	42	43	41	43	45	42	37	39	35	35	55.8
Newton.....	Maximum	60	58	53	43	56	51	47	42	40	45	58	55	49	53	60	63	60	54	60	64	68	58	53	58	54	63	51	55	68	75	37.1	
	Minimum	43	40	31	33	33	34	31	30	29	31	29	42	39	39	35	36	43	35	35	37	40	39	40	41	42	42	43	39	39	42	59.5	
Phillipsburg.....	Maximum	68	62	52	45	61	58	52	45	43	51	63	60	61	57	63	68	61	58	63	70	72	59	48	59	52	66	59	61	72	77	39.2	
	Minimum	37	43	35	35	34	39	33	31	31	33	31	44	44	42	39	35	43	40	39	43	48	43	44	44	44	41	40	39	39	42	55.7 ^a	
Sussex.....	Maximum	65	58	55	43	56	55	48	40	43	49	60	57	48	51	60	60	53	59	66	71	57	51	56	54	66	50	52	71	.....	.....	37.4 ^b	
	Minimum	37	41	32	33	34	34	33	31	30	33	28	43	41	40	36	31	43	42	36	41	.....	41	40	43	45	43	38	40	38	.....	.....	
<i>The Red Sandstone Plain.</i>																																	
Bayonne.....	Maximum	66	58	49	41	61	48	52	40	45	52	62	60	51	52	62	58	62	55	62	57	63	50	52	58	53	63	46	56	71	70	55.8	
	Minimum	41	39	36	36	37	39	34	33	32	35	35	45	42	44	40	37	43	42	40	45	44	43	37	44	43	44	42	42	41	43	39.9	
Bergen Point.....	Maximum	68	61	49	46	62	.....	53	45	45	.....	59	52	52	62	63	61	65	55	62	58	63	51	56	58	53	63	48	41	69	71	57.5 ^a	
	Minimum	39	39	36	35	36	36	32	32	31	33	32	44	41	40	39	36	38	41	39	41	43	40	43	42	43	40	45	55	71	76	38.5	
Boonton§§.....	Maximum	65	57	52	44	58	50	49	33	42	49	58	52	40	40	62	66	55	52	60	38	40	41	40	42	42	43	40	40	34	38	37.5	
	Minimum	34	45	32	34	34	37	39	33	31	33	21	42	40	40	38	34	38	42	40	38	40	41	40	42	42	43	40	40	34	38	59.2	
Elizabeth.....	Maximum	69	63	52	42	65	57	55	47	45	55	68	64	56	53	66	60	58	65	63	63	60	54	56	60	54	67	53	56	71	74	38.7	
	Minimum	36	44	37	36	36	41	31	34	32	33	29	45	42	41	38	33	39	42	37	42	43	41	43	42	44	43	42	40	37	39	58.8	
Flemington.....	Maximum	67	61	49	43	62	55	55	47	47	55	60	62	61	60	64	68	61	62	65	70	55	50	52	61	55	66	60	58	73	79	39.0	
	Minimum	35	44	37	36	33	41	33	32	32	33	39	44	43	42	38	34	39	39	40	40	43	43	44	43	44	41	41	42	35	41	56.0	
Highwood.....	Maximum	64	58	52	42	60	50	52	40	43	51	60	60	50	50	53	60	64	60	52	62	63	61	51	54	57	54	63	50	53	69	71	37.9
	Minimum	35	39	32	35	35	35	31	33	32	33	28	45	40	40	37	32	40	42	39	42	41	40	41	43	44	44	41	39	38	38	56.5	
Jersey City.....	Maximum	63	59	52	42	62	48	50	41	41	52	62	60	52	54	65	62	61	55	62	61	63	51	55	59	55	64	47	52	72	69	41.2	
	Minimum	40	43	39	36	36	41	35	34	32	35	36	45	43	43	39	43	43	43	44	44	41	49	47	43	42	44	46	45	43	43	59.9	
Lambertville.....	Maximum	66	60	56	47	62	61	52	49	43	50	60	58	61	59	63	67	64	59	62	70	62	53	58	57	64	62	59	70	74	.....	.....	
	Minimum	39	47	39	38	36	41	35	34	34	35	33	45	46	42	40	38	45	41	40	45	46	45	45	44	46	45	43	43	40	44	41.1	
Little Falls.....	Maximum	67	61	50	40	64	52	54	44	45	54	62	62	56	55	64	69	58	59	64	62	64	50	57	62	53	63	51	56	70	74	58.1	
	Minimum	37	38	36	34	34	34	32	32	31	34	30	45	43	40	42	47	43	43	38	43	44	41	40	42	44	44	44	46	35	42	39.3	
Newark.....	Maximum	67	55	48	39	59	47	49	36	42	51	62	59	52	52	61	60	58	53	61	58	60	49	53	59	52	62	46	54	70	71	54.8	
	Minimum	40	41	37	34	36	38	35	31	30	36	36	47	42	41	40	42	45	42	41	47	47	41	42	44	44	44	44	44	44	44	40.5	
New Brunswick.....	Maximum	66	63	50	41	60	56	51	48	41	50	60	58	57	55	62	66	60	58	62	60	62	60	62	56	60	58	63	51	55	56	68	57.5
	Minimum	37	47	37	35	35	41	32	32	31	32	33	45	43	41	39	37	42	40	39	44	43	43	42	40	43	42	40	41	39	43	39.3	
Palisades Park.....	Maximum	64	56	51	39	59	45	50	36	43	51	61	58	50	55	62	64	62	53	62	61	59	45	53	56	53	63	44	54	71	70	55.1	
	Minimum	39	37	35	35	37	33	33	33	32	35	31	41	42	40	38	33	41	42	40	41	44	40	42	43	44	44	44	41	39	41	38.5	
Paterson.....	Maximum	68	59	54	45	62	57	53	47	44	53	64	61	55	53	65	66	59	58	63	63	66	61	56	58	56	55	56	72	77	59.0		
	Minimum	37	46	36	35	37	40	34	32	32	33	31	45	43	41	40	38	41	43	40	44	44	40	42	44	45	45	41	43	39	49	39.9	
Plainfield.....	Maximum	68	60	50	40	64	52	54	44	45	54	62	62	56	55	64	69	58	59	64	62	64	50	57	62	53	63	51	56	70	74	58.1	
	Minimum	35	41	37	35	36	42	32	33	33	35	28	45	43	41	39	35	42	42	39	44	44	42	43	42	44	44	44	44	40	38	41	
Somerville.....	Maximum	67	63	54	42	60	55	53	47	45	52	60	59	58	57	61	68	62	59	63	64	63	49	55	60	56	65	56	58	71	74	58.5	
	Minimum	32	43	35	35	33	37	30																									



Scale of Shades.

0 to 2 inches.
2 to 4 inches.
4 to 6 inches.
6 to 8 inches.
Over 8 inches.

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WEATHER BUREAU
CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

MAY, 1916.

BY
G. HAROLD NOYES
METEOROLOGIST.



TRENTON, N. J.
WEATHER BUREAU OFFICE
JUNE 19, 1916.

Departure of the Mean Temperature from the Normal, May, 1916.



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

VOL. XXIX. TRENTON, N. J., MAY, 1916. No. 5.

GENERAL SUMMARY.

The general weather conditions during May were distinctly typical of New Jersey for the season. Heat, moisture, and cloudiness were approximately normal. From the 14th to the 4th it continued consistently cooler than normal, but during the remainder of the month the warmth was slightly above normal. March and April were cool months, and agricultural conditions were resulting late; May has not afforded enough warm, bright weather to overcome the backward season, and the general condition of crop growth at the close of the month was not quite all that could be desired. The lowest temperatures, as usual, occurred in the northern high lands, and there was considerable frost on the 19th in Sussex County, but it did practically no damage. The highest monthly mean temperatures occurred in Cumberland County, remote from the coast. The northernmost portions of the State were on the dividing line of above and below normal temperature, and the greatest excess of temperatures occurred in the southern sections. In some of the northern districts and along the southeastern coast there was more rain than normal, but elsewhere there was a slight deficiency, though not sufficient to affect agriculture adversely. The thunder showers of the 28th and 29th in the northeastern counties were especially severe, and caused considerable interruption to electrical service and fire damage. Hail occurred during the storm of the 28th. The weather was generally favorable for carrying on usual out-of-door occupations and many of the more frequent than usual showers occurred in the night.

The mean daily stage of the Delaware River at Phillipsburg was 3.6 feet. At Trenton, the mean stage for the month was 4 feet, which was 0.4 foot below normal. There was but slight variation from highest to lowest water of the month.

Storm warnings were displayed along the coast on the 2d, 4th, 10th, and 16th.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 34 stations, was 61.1°, which was 0.9° above normal. The highest monthly mean was 65.2° at Bridgeton and Vineland, and the lowest, 58.2° at Charlotteburg. The highest temperature was 90° on the 28th at several stations in the Southern Interior, and the lowest, 32° at Culvers Lake on the 19th. The greatest daily range of temperature was 44° at Indian Mills on the 1st. A large portion of the southern sections of the State averaged more than 2° above normal, but elsewhere the variation from normal was slight.

PRECIPITATION.

The average precipitation of the State, as deduced from observations of 43 stations, was 3.48 inches, which was 0.43 inch below normal. The greatest monthly amount was 5.27 inches at Bergen Point, and the least, 2.14 inches at Clayton. The greatest amount in 24 consecutive hours was 2.80 inches at Jer-

sey City on the 16th-17th, and was the result of the cyclonic storm which passed at that time. Rain fell with unusually regular frequency, and there were but few consecutive days without a shower. The average number of days throughout the State, on which 0.01 inch or more rain fell, was 12, which was 1 more than normal.

WIND.

The prevailing wind direction was from the northwest, with an approximate velocity of 12 miles per hour, which was somewhat above normal. The highest velocity, sustained for 5 consecutive minutes, was 60 miles per hour from the northwest on the 12th, at Long Branch. High winds occurred also on the 11th, 17th, 18th, 25th, and 28th.

SUNSHINE AND CLOUDINESS.

The average number of clear days for the month was 12, partly cloudy, 11, cloudy, 8, which was 1 more partly cloudy, and 1 less cloudy, than normal. Sunshine approximated 60 per cent. of the possible, and was about normal.

MISCELLANEOUS.

Atmospheric pressure, reduced to sea level, averaged 29.94 inches, which was 0.05 inch below normal. Highest pressure occurred on the 13th, and lowest on the 17th. Thunder storms occurred very generally on the 8th, 25th, 27th, 28th, 29th, and there were a few other scattered dates of occurrence. Hail occurred on the 25th in the south, and on the 28th in the north. Dense fog occurred on the 1st, 15th, 16th, 24th, 25th, and 26th, principally along the coast, and on a few other dates, elsewhere. Solar halos were observed on the 8th, 22d, and 27th, and a lunar halo on the 11th. On the 28th of April, 1916, the aurora was observed at Layton, Newton, Plainfield, and Sandy Hook, from about 9 p. m. to midnight. The phenomenon appeared like a long trail of whitish smoke, or a band of narrow white cloud, shading to a greenish yellow, and extending in a curving arch, from the west-northwest into the east.

COMPARATIVE DATA FOR MAY.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	of inch or more prec.
1885.....	57.3	90	29	2.74	5.20	1.18	.....	.....	.....	.....
1886.....	58.8	87	36	6.07	8.46	4.15	.....	.....	.....	.....
1887.....	63.3	94	35	1.37	3.82	0.08	.....	.....	9	6
1888.....	58.6	90	26	4.92	6.48	3.00	.....	.....	18	16
1889.....	62.3	94	32	4.09	6.60	2.43	.....	.....	11	12
1890.....	60.7	87	33	4.24	7.17	2.60	.....	.....	11	12
1891.....	59.5	93	28	2.97	5.39	1.78	9	11	11	9
1892.....	60.1	90	30	5.04	6.52	3.26	8	13	10	13
1893.....	59.4	95	29	4.07	6.38	2.55	43	8	10	10
1894.....	61.4	93	30	7.72	15.61	3.57	11	9	11	13
1895.....	60.9	102	28	2.85	3.95	1.66	12	12	7	8
1896.....	65.3	98	29	3.21	4.54	1.62	10	12	9	10
1897.....	60.6	87	29	5.68	9.11	1.71	11	12	8	12
1898.....	58.5	93	29	7.00	9.26	3.92	8	8	15	18
1899.....	61.1	94	29	1.92	3.15	1.15	12	12	7	9
1900.....	60.9	98	26	4.71	7.33	2.53	13	7	11	10
1901.....	58.6	90	29	5.60	8.13	3.10	9	9	13	16
1902.....	60.3	95	29	2.04	4.63	1.11	15	11	5	7
1903.....	62.7	98	27	0.59	1.32	0.08	16	10	5	4
1904.....	62.8	97	31	2.60	6.69	1.01	17	9	5	8
1905.....	61.4	89	22	1.71	3.94	0.42	12	11	8	8
1906.....	61.0	94	24	4.21	6.28	2.37	16	8	7	10
1907.....	55.4	91	22	5.05	8.09	2.51	12	9	10	12
1908.....	61.6	95	29	7.10	9.99	4.39	9	10	12	13
1909.....	60.0	91	27	2.30	4.84	0.79	10	11	10	9
1910.....	60.0	94	27	2.54	4.25	1.48	10	10	11	12
1911.....	64.5	99	22	1.37	3.84	0.31	14	11	6	7
1912.....	62.0	92	31	4.09	6.47	2.79	11	11	9	11
1913.....	60.3	94	25	3.45	4.86	2.53	15	7	9	9
1914.....	63.1	98	30	2.93	5.09	0.95	14	9	7	10
1915.....	58.1	88	30	3.82	6.15	2.00	13	7	11	13
1916.....	61.1	90	32	3.48	5.27	2.14	12	12	11	8

Climatological data for May, 1916.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation .01 in. or more.	Clear.	Pt. cloudy.			Cloudy.
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	25	61.4	+0.7	85	28†	39	19†	39	2.73	-1.16	0.55	0	9	20	4	7	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	24	58.2	+0.9	82	29	34	14	40	3.55	-1.25	1.61	0	10	18	9	4	e.	George S. Briggs.
Culvers Lake††.....	Sussex.....	848	15	.....	.....	.....	.....	32	19	.....	3.52	+0.02	0.77	0	15	19	5	7	e.	Brice E. Riker.
Dover.....	Morris.....	600	32	58.9	+0.3	82	28†	34	19	37	2.55	-1.59	1.34	0	13	2	22	7	.....	William C. Harris.
Layton.....	Sussex.....	480	16	59.6	+1.7	83	28†	33	19	41	2.90	-0.43	0.62	0	14	16	4	11	s.	A. M. Depue.
Newton.....	Sussex.....	769	35	59.4	+0.1	81	28	39	19	32	2.42	-1.72	0.40	0	16	14	13	4	nw.	Irving G. Kern.
Phillipsburg.....	Warren.....	363	34	62.2	+0.9	88	28	40	19	36	2.51	-1.54	0.82	0	13	14	8	9	nw.	D. Wilson Smith.
Sussex.....	Sussex.....	442	26	59.8*	-0.1	82	29	34	19	34*	.....	.....	.....	.....	.....	.....	.....	.....	.....	George Dymock.
Means and extremes.....				59.9	+0.6	88	28	32	19	41	2.88	-1.10	1.61	0	13	15	9	7	nw.	
<i>The Red Sandstone Plain.</i>																				
Bayonne.....	Hudson.....	50	26	61.0*	+0.7	81	25†	42	1	29	5.21	+1.63	2.16	0	12	.....	.....	.....	nw.	Erskine R. Eadie.
Bergen Point††.....	Hudson.....	37	19	60.0	+0.3	83	30	39	18†	33	5.27	+1.29	1.71	0	12	4	21	6	nw.	William H. Mitchell.
Boonton.....	Morris.....	400	§26	59.4	.....	82	28†	36	19	40	3.59	-0.66	1.80	0	12	16	5	10	nw.	J. W. Demmers.
Chatham.....	Morris.....	330	14	.....	.....	.....	.....	.....	.....	.....	3.84	-0.08	1.85	0	15	16	4	11	.....	Miss M. A. Butler.
Elizabeth.....	Union.....	45	37	61.8	-0.4	85	28†	37	19	35	4.42	+0.50	.....	0	12	7	17	7	nw.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	28	62.0	+2.1	89	28	40	1†	41	2.32	-1.97	0.61	0	11	16	7	8	w.	Hiram E. Deats.
Highwood.....	Bergen.....	90	27	59.0	-0.7	81	25	34	19	35	4.46	+0.62	2.00	0	9	6	14	11	nw.	Charles J. Bates.
Jersey City.....	Hudson.....	10	17	62.0	+0.9	83	30	43	19	30	4.02	+0.84	2.80	0	13	5	17	9	nw.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	29	62.4	+0.7	85	28	41	19	34	3.34	-0.73	0.73	0	11	8	17	6	nw.	Samuel W. Cochran.
Little Falls.....	Passaic.....	180	§13	61.0*	.....	85	29	42	21	34†	3.60	-1.16	1.55	0	14	16	2	13	w.	Montclair Water Co.
Newark.....	Essex.....	159	74	61.0	+0.2	81	28†	43	19	30	4.02	-0.02	2.73	0	15	14	8	9	nw.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	110	63	61.6	+1.0	85	28	39	1	42	3.17	-0.74	0.98	0	11	19	6	6	w.	N. J. Experiment Station.
Palisades Park.....	Bergen.....	80	1	58.8	.....	81	25	36	19	32	4.06*	.....	1.82	0	9	9	15	7	nw.	George P. Kirsten.
Paterson.....	Passaic.....	80	45	62.2	+0.9	85	30	41	1†	34	4.33	-0.16	1.39	0	11	4	22	5	nw.	Heber A. Probert.
Plainfield.....	Union.....	100	30	60.6	+0.3	83	29	37	19	37	3.10	-0.73	1.50	0	14	7	14	10	sw.	John Neagle.
Pompton Plains.....	Morris.....	195	14	.....	.....	.....	.....	.....	.....	.....	4.50	+0.14	1.54	0	11	.....	.....	.....	.....	M. S. Taylor
Somerville.....	Somerset.....	60	34	60.6	+0.5	87	28	35	19	41	3.09	-1.03	1.18	0	12	15	8	8	nw.	A. A. Macdonald.
South Orange.....	Essex.....	200	46	60.4	+0.4	81	29	41	1	28	4.96	+1.50	2.20	0	14	10	13	8	nw.	Dr. W. J. Chandler.
New York, N. Y.....		365	46	59.8	+0.5	77	29	44	18	23	3.49	+0.31	2.28	0	14	4	13	14	nw.	U. S. Weather Bureau.
Means and extremes.....				60.9	+0.5	89	28	34	19	42	3.96	-0.04	2.80	0	12	11	12	8	nw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland and Burlington.....	30	35	65.2	+1.3	90	28	41	19	33	3.43	-0.50	0.93	0	11	16	10	5	w.	Henry A. Jorden.
Burlington.....	Burlington.....	12	§30	64.4	+2.3	88	28	43	19	39	2.22	-2.01	0.64	0	10	22	4	5	nw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	24	63.8*	+1.9	90	28	39	10	33†	2.14*	-1.12	0.55	0	11	21	6	4	.....	George L. Wilson.
Haddonfield.....	Camden.....	75	29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. Chas. F. Richardson
Hammononton.....	Atlantic.....	103	15	.....	.....	.....	.....	.....	.....	.....	3.63	-0.39	1.53	0	9	16	8	7	w.	Frederick H. Hoefler.
Hightstown.....	Mercer.....	140	24	62.1*	+1.0	87	28	38	19	36	2.41	-1.41	0.67	0	10	.....	.....	.....	sw.	Leon Dunbar.
Imlaystown.....	Monmouth.....	185	28	60.9	+1.3	85	29	36	19	38	3.25	-0.64	1.00	0	8	15	9	7	w.	H. E. Bullock.
Indian Mills.....	Burlington.....	76	27	63.6	+1.6	90	28	38	10†	44	3.65	-0.39	1.20	0	8	12	13	6	nw.	James M. Armstrong.
Lakewood.....	Ocean.....	54	13	61.2	+0.7	89	28	36	10	42	3.13	-0.73	1.87	0	11	11	11	9	nw.	R. W. Holman.
Moorestown.....	Burlington.....	75	54	63.4	+2.3	87	28	42	10†	37	3.32	-0.71	1.05	0	11	14	13	4	w.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	9	.....	.....	.....	.....	.....	.....	.....	4.36	.....	1.13	0	9	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	18	.....	.....	.....	.....	.....	.....	.....	3.33	-0.03	1.12	0	10	20	6	5	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	45	62.2	+1.1	87	28	42	19	38	2.45	-1.07	0.70	0	10	8	9	14	w.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	23	61.8	+2.1	85	11	38	10†	34	3.87	+0.44	0.92	0	7	14	10	7	nw.	Frank R. Austin.
Vineland††.....	Cumberland.....	87	48	65.2*	+3.0	90	28	40	10	36	2.79	-0.98	0.78	0	11	.....	.....	.....	se.	E. V. C. Hendrickes.
Woodbine.....	Cape May.....	43	25	.....	.....	.....	.....	.....	.....	.....	3.24	-0.66	0.60	0	8	.....	.....	.....	.....	Baron de Hirsch Agr. Sch.
Philadelphia, Pa.....		117	46	64.7	+2.5	86	28	45	19	25	2.75	-0.45	1.01	0	11	8	12	11	nw.	U. S. Weather Bureau.
Means and extremes.....				63.0	+1.4	90	28	36	10†	44	3.22	-0.70	1.87	0	10	15	9	7	nw.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	27	59.0	+0.3	83	30	43	19	30	2.16	-1.55	1.28	0	12	.....	.....	.....	w.	Wilbur H. Pancoast.
Atlantic City.....	Atlantic.....	16	43	60.3	+2.8	84	11	45	19	31	3.91	+0.91	1.20	0	11	9	7	15	sw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	32	60.8	+2.2	82	2	47	10	28	4.02	+1.03	1.14	0	12	11	16	4	nw.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	9	58.8*	.....	80	25	44*	1†	24	3.32	.....	2.10	0	15	7	9	15	nw.	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	18	58.8	0.0	79	30	44	1	22	3.57	-0.41	2.43	0	15	9	11	11	nw.	U. S. Weather Bureau.
Means and extremes.....				59.5	+1.3	84	11	43	19	31	3.40	0.00	2.43	0	13	9	11	11	nw.	
For the State.....				61.1	+0.9	90	28	32	19	44	3.48	-0.43	2.80	0	12	12	11	8	nw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

* Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Vineland is South Vineland.

Daily precipitation for May, 1916.

Stations.	Day of month.																															Total.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>The Highlands and Kittatinny Valley.</i>																																	
Belvidere.....				.54	.30		.44								.07	.24	.42						.55					.11	.06			2.73	
Charlotteburg.....			.15		.14		T.								.26	* 1.61							.52		T.		.39	.40		.08		3.55	
Culvers Lake.....		T.	T.	.30	.10	.01	.02	.46						T.	.17	.25	.39						.58	.02	.04		.02	.37	.77	.02		3.52	
Dover.....				.10	.08		.06	.07						*	.08	* 1.34				.09			.47		.04		*	.29	T.	T.		2.55	
Layton.....				.52	.01	.03	.07	.05							.13	.29	.41	.02					.47		.02		.04	.22	.62			2.90	
Newton.....				.33	.35	.01	.02	.08							.09	.24	.37						.40	.03	.01	T.	.02	.30	.10	.04	.03	2.42	
Phillipsburg.....				.15	.33	.01	.03	.02	.02				T.		T.	.23	.59				.01		.71		.23			.14	.04			2.51	
Sussex.....			.26		.22		.04	.18							.16												.11	.88	.69			\$	
<i>The Red Sandstone Plain.</i>																																	
Bayonne.....					.33		.18	.01	.03						T.	.99	2.16			.06			.25	T.	.07		.05	1.04	.04			5.21	
Bergen Point.....				.05	.34		.18	T.	T.						.05	1.71	1.44		T.	.07		T.	.33	T.	.09		.08	.53	.40	T.		5.27	
Boonton.....				.09	.06	T.	.01	.01							.10	.01	1.80	.11		T.			.38	.07		T.		.20	.75	T.	T.	3.59	
Chatham ||.....				.08	.10	.12	.06	.07							.06	.08	1.85	.42			.18		.27	.22		.06		.07	.20			3.84	
Elizabeth.....				.04	.30	.02	.27	.01							T.	*	3.01						T.		.09		.39	.23		T.			4.42
Flemington.....				.02	.33		.09	.07	.29				T.	.02	T.	.26	.29			T.			.61	T.	T.			.30	.04	T.		2.32	
Highwood.....					.20		.03	.03							T.	.22	.73	1.42		T.	T.		.29	T.	T.		T.	.65	.83	T.	.06	4.46	
Jersey City**.....					.28		.14	.09							.03	T.	* 2.84				.04		*	.24		T.		.05	.24	.06	.01		4.02
Lambertville.....				.03	.54		.09		.73							.31	.42						.65		.28			.27	.02			3.34	
Little Falls**.....				.08	.10		.05								.09	.10	1.55	.20		.03			.04	.28	.02			.93	.10	.03		3.60	
Newark **.....			.02	.21	T.		.11	.22							.01	.02	2.64	.20		.04			.02	.32	.01	T.		.07	.10	.03	T.		4.02
New Brunswick.....					.38		.14	.03	.24						.03	T.	.42	.98			.03		.48		T.			.42	.02			3.17	
Palisades Park.....			T.	.04	.18	T.	.09	T.							T.	.22	.90	1.82					.24		T.		T.	.54	.03	T.		4.06	
Paterson.....				.06	.10	.01	.05								T.	.23	.44	1.39		T.			.32	.03	T.		T.	.50	1.20	T.		4.33	
Plainfield **.....				.03	.25	.01	.11	.01						T.	T.	.06	.84	.66		.05			.15	.42		.16		T.	.31	.04	T.		3.10
Pompton Plains ||.....				.13	.06		.05									.38	.03	1.28	.08				.31	.16				.48	1.54			4.50	
Somerville.....				.05	.31		.12	.06	.20							.46	.72			.07			.61	T.	.11			.36	.02	T.		3.09	
South Orange.....				.01	.23		.10	T.	.19							.01	2.20	1.35		T.	.03		T.	.42	.02	.08		.03	.26	.03	T.	T.	4.96
New York, N. Y.***.....		T.		.04	.25	T.	.17	.03	T.						.02	.01	2.11	.21		.04			.18	T.	T.		.05	.33	.03	T.		3.49	
<i>The Southern Interior.</i>																																	
Bridgeton.....		T.		.40	.12		.20								.05	.88	.05						.55	.14	.54				.10	.40		3.43	
Burlington.....				.03	.40		.21		.07							.45	.19						.54		.27				*	.06		2.22	
Clayton.....					.46		.21									.20	.22						.55	.01	.24			.07	.01	.15	.02	2.14	
Haddonfield.....																																	
Hammonton.....					.63		.16						T.	T.		.88	.65	T.					.48		.55				.02	.08	.18	3.63	
Hightstown.....				*	.40		.20	.05	.12							.67	.31						.44		.07				.15			2.41	
Imlaystown.....					1.00	T.	.20		.20						T.	.80	.30						.30	.10	.35				T.			3.25	
Indian Mills.....				T.	.50		.21								T.	.48	.50						.55		1.20			.07		.14		2.65	
Lakewood.....				T.	.20		.24		.10						T.	1.25	.62			.06			.31	.02	.04				T.	.19	.10	3.13	
Moorestown.....				.03	.39		.21		.43						T.	.35	.19	.03					.59	.02	1.05				.03			3.32	
Northfield.....					.66		.18									.31	1.13						.37	.07	T.	.60			.05	T.	.99	4.36	
Pleasantville.....					.20		.11									.11	.94						.39	.09	.35				.02	.95	.17	3.33	
Trenton***.....			.03	.41	.09		.12							T.	T.	.53	.17	T.	T.				.46		.29		T.	.34	.01	T.		2.45	
Tuckerton.....				.54	.23										T.	.92	.59						.33		.73			T.			.53	3.87	
Vineland.....			T.		.36		.15								T.	.01	.46	.32					.63	.01		.42			.10	.03	.30	2.76	
Woodbine.....					.60		.10									.31	.56						.48	.09		.30					.80	3.24	
Philadelphia, Pa.***.....		T.		.06	.31		.17	.17							T.	T.	.11	.27					.57	T.	1.01			.05	.01	T.		2.75	
<i>The Sea Coast.</i>																																	
Asbury Park**.....				.01	.13	.01	.15	.06					T.	T.	T.	.88	.40		T.			T.	.14	.01	T.			.03	.24	T.	.10	T.	2.16
Atlantic City***.....				.30	.44		.13									.69	.51						.38	.05	.71				.01		.53	.16	3.91
Cape May City***.....				.41	.23		.03	.18							T.	.73	.41	T.					.74	.03	.34			.20	.03	.69		4.02	
Long Branch**.....		T.		.02	.23	T.	.14	.02							.02	.01	2.10	.29		.03			.10	T.			.03	.30	.01	.01		3.32	
Sandy Hook***.....				.02	.22	.02	.14	.06							T.	T.	.02	2.01	.42		.04			.18	.01	T.		.21	.19	.02	.01		3.57

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded.

|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.

* Precipitation included in the next following measurement. **Precipitation for 24-hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.				Moisture.		Sun- shine
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	Percentage of possible sunshine.
							Miles per hour.	Direction.	Date.			
Atlantic City.....	29.96	30.37	13	29.42	17	8	26	w.	28	75	70	64
Asbury Park.....	29.97	30.36	13	29.61	16	8	36	nw.	17			
Cape May City.....	29.97	30.36	13	29.40	17	15	60	nw.	12	76	66	60
Long Branch.....	29.94	30.33	13	29.40	17	11	48	w.	11	73	67	56
Newark.....	29.92	30.33	13	29.39	17	16	63	nw.	11	68	58	59
New York, N. Y.....	29.92	30.33	13	29.40	17	10	37	n.	25	67	58	60
Palisade Park.....	29.92	30.34	13	29.40	17	12	41	nw.	12	81	78	58
Philadelphia, Pa.....	29.95	30.36	13	29.44	17	14	41	nw.	12	81	78	58
Sandy Hook.....	29.92	30.34	13	29.36	17	12	42	w.	17	72	66	61
Trenton.....	29.91	30.34	13	29.45	17							

Stations.

to the preceding day, on which it almost always occurs.



Scale of Shades.

0 to 2 inches.
2 to 4 inches.
4 to 6 inches.
6 to 8 inches.
Over 8 inches.

Scale of Miles.
0 10 20 30 40 50 60 70 80 90 100
Scale of Kilometers.
0 16 32 48 64 80 96 112 128 144 160

UNIVERSITY OF ILLINOIS
URBANA

U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU

CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

JUNE, 1916.

BY

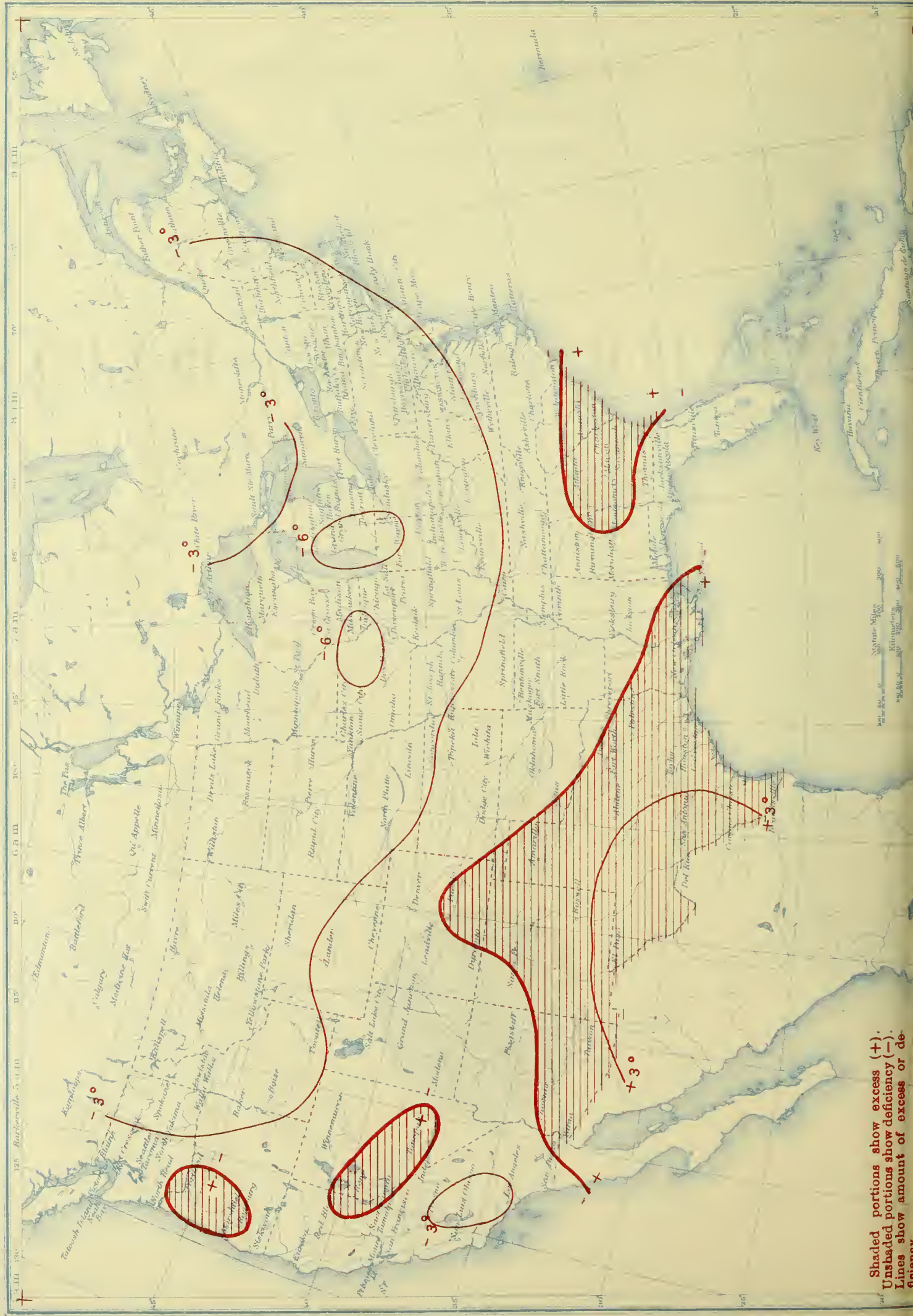
G. HAROLD NOYES

METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
JULY 18, 1916.

Departure of the Mean Temperature from the Normal, June, 1916.



Shaded portions show excess (+).
 Unshaded portions show deficiency (-).
 Lines show amount of excess or deficiency.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

Vol. XXIX. TRENTON, N. J., JUNE, 1916. No. 6.

GENERAL SUMMARY.

There has been some notice in the public press of the summer weather of 1816, which was referred to as "the year without a summer," and there has been an illogical superstition that the summer of this year would repeat that of a century ago. Blodgett states that June, 1816, was 5° below average, probably meaning in the northeastern states. Records of that period were not carefully nor extensively kept, and are not comparable, justly, with those of to-day. June of this year in New Jersey compares almost identically with June, 1907, and was not so cold as June, 1903, and these have been the three coldest months since records have been compiled with strictest accuracy. It is reasonable to suppose, therefore, that the rather indefinite cold summer of 1816 has been repeated several times in the past century. The weather of this month has not been pleasant; while the amount of rainfall was approximately normal, its frequency of occurrence was greater than usual, with a consequent subnormal amount of sunshine. This is the first time on record that 90° or higher has not occurred in some portion of the State in June; the highest this month was 87°. There were about 5 days on which the temperature was up to normal or a degree or two above; while being not only below normal the remainder of the month, on some days it was from 0° to 14° subnormal in warmth. Agricultural progress was slow and not very satisfactory on account of the weather, and crop growth was about two weeks late; except for this retardation, however, the condition of vegetation was reasonably satisfactory. There were fewer thunderstorms throughout the State than usually occur in June, except in the southeastern and southern portions, where they were more than ordinarily frequent. There were a few reports of hail, one of which, from the observer at Vineland, states that there was a good deal of damage by breaking window panes and hot-house glass. Some of the hail stones were 6 to 7 inches in circumference, and a few had a clear center, shading off to a snow color with scallops. There was but little or no hail to the south and west of Vineland. The storm occurred on the 11th, at 5 p. m., lasting about 20 minutes, and damaged berries and farm produce.

The mean daily stage of the Delaware River at Phillipsburg was 3.8 feet. At Trenton, the mean stage for the month was 5 feet, which was 0.5 foot above normal; the total range of the stage for the month was but 2.1 feet. Storm warnings were displayed along the coast on the 2d and at Sandy Hook on the 7th.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 37 stations, was 64.7°, which was 4.4° below normal. The highest monthly mean was 68.0° at Bridgeton, and the lowest, 61.4°, at Charlotteburg. The highest temperature was 87°, and occurred at Bridgeton and Tuckerton on the 11th, and at Newton on the 27th; the lowest was 36° at Charlotteburg on the 2d. The greatest daily range of temperature

was 43° at Layton and Charlotteburg. Temperatures of all stations ranged from 2° to 6° below normal, the greatest departure being in the southern interior.

PRECIPITATION.

The average precipitation of the State, as deduced from observations of 44 stations, was 4.20 inches, which was 0.37 inch above normal. The greatest monthly amount was 5.99 inches at Highwood, and the least, 2.22 inches, at Vineland. While in no particular case was there heavy rainfall, nevertheless, it was remarkable for its frequency. It rained on almost consecutive days from the 3d to the 11th, and from the 16th to the 21st, and there were generally copious rains on the 25th. The greatest amount of rain in 24 consecutive hours was 2.04 inches at Indian Mills on the 25th. The average number of rainy days was 13, which was 4 more than normal.

WIND.

The prevailing wind direction was from the northwest, which was somewhat abnormal, with an approximate hourly velocity of 10 miles. The highest velocity, sustained for 5 consecutive minutes, was 40 miles per hour from the west on the 19th at Sandy Hook.

SUNSHINE AND CLOUDINESS.

The average number of clear days for the month was 10; partly cloudy, 9; which was 2 each below normal; and cloudy, 11, which was 4 more than normal. Sunshine averaged approximately 52 per cent. of the possible, being somewhat below normal.

MISCELLANEOUS.

Atmospheric pressure, reduced to sea level, averaged 29.95 inches, which was 0.03 inch below normal. Thunderstorms occurred, though not in all parts of the State on each date, on the 3d, 4th, 5th, 11th, 13th, 17th, 18th, 19th, 21st, 24th, 25th, and 28th. Hail occurred at scattered points on the 3d, 11th, 13th, and 18th. Dense fog occurred very generally on the 25th, 26th, and 27th, and on a few other dates at various stations. Solar halos were observed on the 5th and 20th at Atlantic City.

COMPARATIVE DATA FOR JUNE.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more prec.
1885.....	68.7	97	39	1.79	3.37	0.72	.....	.....	.....	.....
1886.....	67.1	97	41	3.38	5.79	2.22	.....	.....	.....	.....
1887.....	68.2	97	42	6.77	10.29	4.21	.....	.....	.....	.....
1888.....	70.8	99	39	2.59	5.69	1.67	.....	.....	.....	.....
1889.....	69.9	91	40	3.73	6.75	2.39	.....	.....	.....	.....
1890.....	70.7	95	42	3.59	5.16	0.99	11	13	10	10
1891.....	69.7	102	38	2.92	6.71	1.24	14	13	6	7
1892.....	72.4	98	44	3.85	6.12	1.58	10	12	8	5
1893.....	69.7	103	40	2.95	7.02	0.66	10	11	9	11
1894.....	70.6	102	35	2.28	5.90	0.99	14	11	8	8
1895.....	71.7	103	39	3.24	5.99	0.93	11	11	8	9
1896.....	68.1	96	37	5.46	13.45	2.64	12	10	8	10
1897.....	66.1	95	35	3.38	5.50	2.12	10	13	8	10
1898.....	70.1	100	38	2.10	3.54	1.13	14	12	4	10
1899.....	72.3	103	38	2.50	4.34	1.01	15	10	5	8
1900.....	70.4	97	39	3.08	4.91	1.10	12	12	6	7
1901.....	70.0	103	35	1.57	4.36	0.73	18	8	4	8
1902.....	67.5	99	37	6.57	10.21	4.54	14	11	5	5
1903.....	64.0	92	37	7.68	15.02	2.39	6	10	14	11
1904.....	68.6	100	34	3.13	5.44	1.91	13	10	7	15
1905.....	68.3	96	35	3.43	8.71	1.67	11	12	7	12
1906.....	70.4	98	38	4.48	9.18	1.45	11	11	8	10
1907.....	64.7	96	37	4.41	6.85	3.15	12	10	8	12
1908.....	69.9	99	35	2.32	4.63	0.77	16	12	2	10
1909.....	70.0	99	36	3.26	5.70	1.71	9	10	11	12
1910.....	66.9	95	34	5.17	8.01	2.66	9	10	11	13
1911.....	68.9	97	40	5.36	10.11	2.84	9	12	9	14
1912.....	68.0	98	33	1.94	3.61	0.91	9	12	9	13
1913.....	69.1	98	37	1.80	3.76	0.68	19	8	3	5
1914.....	68.5	98	35	2.66	4.85	1.09	16	9	6	7
1915.....	67.0	95	36	3.12	6.51	1.40	13	10	7	11
1916.....	64.7	87	36	4.20	5.99	2.22	10	9	11	13

Climatological data for June, 1916.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation 40 in. or more.	Clear.	Pt. cloudy.			Cloudy.
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	25	.....	.....	.....	.....	43	1	36	5.47	+1.07	1.30	0	14	.....	.....	.....	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	24	61.4	-4.1	81	30	36	2	43	4.66	+0.40	.....	.....	13	14	9	7	sw.	George S. Briggs.
Culvers Lake.....	Sussex.....	848	15	.....	.....	.....	.....	37	1	.....	5.56	+1.72	1.23	0	19	17	4	9	se.	Breece E. Riker.
Dover.....	Morris.....	600	32	62.4	-4.8	82	29	43	1†	35	4.72	+0.60	.....	0	15	2	16	12	.....	William C. Harris.
Layton.....	Sussex.....	480	16	64.2	-2.1	83	28†	38	1	43	5.18	+1.76	0.98	0	16	12	7	11	se.	A. M. Depue.
Newton.....	Sussex.....	769	35	62.4	-5.3	80	17†	43	1	33	5.38	+1.59	1.23	0	22	12	10	8	nw.	Irving G. Kern.
Phillipsburg.....	Warren.....	363	34	65.6	-4.1	87	27	46	2	36	5.18	+1.03	1.58	0	15	.....	.....	.....	nw.	D. Wilson Smith.
Sussex.....	Sussex.....	442	26	62.8 ^a	-4.8	83	26	42	2	36	4.90	+1.17	1.08	0	12	11	7	12	nw.	George Dymock.
Means and extremes.....				63.1	-4.2	87	27	36	2	43	5.13	+1.17	1.58	0	16	11	9	10	nw.	
<i>The Red Sandstone Plain.</i>																				
Bayonne.....	Hudson.....	50	26	65.2	-4.5	86	29	50	1	30	3.89	+0.25	1.44	0	16	10	9	11	s.	Erskine R. Eadie.
Bergen Point.....	Hudson.....	37	19	64.2	-4.6	83	18†	47	1	31	4.51	+0.56	1.52	0	12	5	18	7	nw.	William H. Mitchell.
Boonton.....	Morris.....	400	26	63.6 ^b	.....	84	30	42	2	37	4.35	+0.61	1.70	0	16	13	5	12	sw.	J. W. Demmers.
Chatham.....	Morris.....	330	14	.....	.....	.....	.....	.....	.....	.....	5.87	+1.83	1.96	0	11	18	4	8	.....	Miss M. A. Butler.
Elizabeth.....	Union.....	45	37	6.59	-5.3	86	29	49	1†	37	4.21	+0.61	1.40	0	13	8	11	11	se.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	28	65.4	-3.7	86	26	45	1	35	3.03	-1.34	0.92	0	15	15	5	10	e.	Hiram E. Deats.
Highwood.....	Bergen.....	90	27	63.0	-5.3	81	28†	43	1	35	5.99	+2.21	1.49	0	13	5	13	12	se.	Charles J. Bates.
Jersey City.....	Hudson.....	10	17	66.4	-3.6	86	29	52	10†	26	5.34	+2.04	1.76	0	12	9	9	12	se.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	29	66.0	-4.3	84	27	49	1	29	2.73	-1.55	1.23	0	13	11	12	7	nw.	Samuel W. Cochran.
Little Falls.....	Passaic.....	180	113	64.6	.....	86	28	44	1	34	5.76	+1.48	1.40	0	13	12	8	10	w.	Montclair Water Co.
Newark.....	Essex.....	159	74	64.8	-4.9	84	28	50	10	29	4.22	+0.59	1.67	0	12	12	6	12	se.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	110	63	64.7	-4.9	82	17†	44	6	32	3.39	-0.38	1.33	0	15	15	6	9	w.	N. J. Experiment Station.
Palisades Park.....	Bergen.....	80	1	63.6	.....	84	28	44	1	35	5.29	.....	.....	0	14	8	11	11	.....	George P. Kirsten.
Paterson.....	Passaic.....	80	45	65.6	-4.5	84	18†	49	1	31	4.63	+0.31	1.12	0	17	3	19	8	ne.	Heber A. Probert.
Plainfield.....	Union.....	100	30	64.4	-4.9	82	28†	46	1	33	4.80	+0.67	1.46	0	15	9	8	13	sw.	John Neagle.
Pompton Plains.....	Morris.....	195	14	.....	.....	.....	.....	.....	.....	.....	4.34	+0.18	1.18	0	19	.....	.....	.....	.....	M. S. Taylor
Somerville.....	Somerset.....	60	34	64.4	-4.8	85	27	43	1	35	3.19	-0.96	1.04	0	15	10	9	11	nw.	A. A. Macdonald.
South Orange.....	Essex.....	200	46	64.6	-4.2	83	28	49	1†	30	4.98	+1.42	2.00	0	10	7	9	14	nw.	Dr. W. J. Chandler.
New York, N. Y.....		365	46	64.2	-4.3	82	28	51	10	26	3.94	+0.68	1.34	0	13	4	13	13	nw.	U. S. Weather Bureau.
Means and extremes.....				64.7	-4.6	86	26†	42	2	37	4.47	+0.50	2.00	0	14	10	10	10	nw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	35	68.0	-5.4	87	18	48	1	32	3.99	+0.22	1.35	0	11	14	6	10	se.	Henry A. Jorden.
Burlington.....	Burlington.....	12	30	66.5	-4.2	85	27	49	1	31	4.06	+0.14	1.44	0	15	16	4	10	nw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	24	66.8	-4.6	86	27	44	2	36	3.83	+0.43	1.87	0	13	15	7	8	.....	George L. Wilson.
Hammoncton.....	Atlantic.....	103	15	.....	.....	.....	.....	.....	.....	.....	3.20	+0.01	1.07	0	12	12	11	7	s.	Frederick H. Hoefler.
Hightstown.....	Mercer.....	140	24	65.6 ^a	-3.8	86	27	44	1	34	2.79	-1.22	1.14	0	10	.....	.....	.....	sw.	Leon Dunbar.
Imlaystown.....	Monmouth.....	185	28	64.4	-6.4	85	5†	43	1	35	2.30	-1.68	1.20	0	6	12	7	11	w.	H. E. Bullock.
Indian Mills.....	Burlington.....	76	27	65.4	-5.6	86	29	45	1†	36	4.50	+0.71	2.04	0	11	8	13	9	e.	James M. Armstrong.
Lakewood.....	Ocean.....	54	13	64.4	-3.2	86	19	43	1	34	5.37	+1.70	1.71	0	12	8	8	14	nw.	R. W. Holman.
Moorestown.....	Burlington.....	75	54	66.4	-3.8	83	17†	48	1	29	3.78	-0.02	1.40	0	11	11	12	7	nw.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	9	.....	.....	.....	.....	.....	.....	.....	3.92	.....	0.77	0	14	.....	.....	.....	nw.	William L. Flick.
Pleasantville.....	Atlantic.....	26	18	.....	.....	.....	.....	.....	.....	.....	2.94	-0.55	1.55	0	11	5	13	12	se.	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	45	65.8	-3.7	84	26	50	1	25	2.22	+0.45	1.45	0	12	11	11	8	se.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	23	65.0	-4.0	87	18	45	2	33	4.22	+0.45	1.45	0	12	11	11	8	.....	Frank R. Austin.
Vineland II.....	Cumberland.....	87	48	66.6	-5.0	84	19†	48	1	28	2.22	-1.36	0.62	0	11	.....	.....	.....	.....	E. V. C. Hendricks.
Woodbine.....	Cape May.....	43	25	.....	.....	85 ^c	18	.....	.....	.....	3.09	-0.41	0.98	0	10	.....	.....	.....	.....	Baron de Hirsch Agr. Sch.
Philadelphia, Pa.....		117	46	67.9	-3.3	84	29	54	10	22	2.83	-0.47	1.70	0	10	8	11	11	nw.	U. S. Weather Bureau.
Means and extremes.....				65.9	-4.5	87	18	43	1	36	3.59	-0.12	2.04	0	11	11	9	10	nw.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	27	62.0	-6.2	82	18	51	1	24	4.28	+0.48	1.16	0	14	11	4	15	se.	Wilbur H. Pancoast.
Atlantic City.....	Atlantic.....	16	43	63.8	-3.0	78	20	52	1	23	2.33	-0.70	0.59	0	14	7	6	17	sw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	32	65.3	-2.4	81	29	50	1	22	3.11	+0.07	1.52	0	12	10	11	9	e.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	12	9	7	14	.....	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	18	64.0	-4.4	82	29	53	10	21	3.48	-0.49	1.25	0	12	9	7	14	nw.	U. S. Weather Bureau.
Means and extremes.....				63.8	-4.0	82	18†	50	1	24	3.30	-0.16	1.52	0	13	9	7	14	nw.	
For the State.....				64.7	-4.4	87	18†	36	2	43	4.20	+0.37	2.04	0	13	10	9	11	nw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used determining section or division means.

* Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

II Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Vineland is South Vineland.

Daily precipitation for June, 1916.

Stations.	Day of month.																															Total.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>The Highlands and Kittatinny Valley.</i>																																	
Belvidere.....			.68		.30		1.30	.20	*	.04	.21					.82	.84	.11	.04	.11	.23				*	.59						5.47	
Charlotteburg.....			.42		*			*		1.93		.07				*	.96		.37		.51				.40							4.47	
Culvers Lake.....		.47	.42	.02	T.	1.23	.20	.09	.02	.08		.19	.01		1.10	.50	.02	.12	.02	.50				.42	.03		.12					5.56	
Dover.....		.35		.27		*	1.54	.08	*	.23		.13			.47	.37	*	.34		.36				.54				.04				4.72	
Layton.....		.82		.03		.75	.21	.05		.09	.30		.14	.02		.87	.98	.05	.20		.40			T.	.25	.02						5.18	
Newton.....		.04	1.23	.16	.19	.98	.30	.08	.06	.17		.08	T.		.02	.13	.03	.05	.09	.55	T.		.01	.40	.03	.01	.15	.02	T.			5.38	
Phillipsburg.....		.20	.27	T.		1.24	.23	T.	.02	.11					.59	.30		.02	.08	.25	.01			.25	.03		1.58		T.			5.18	
Sussex*.....		.86				1.08	.31			.18		.13			.65	.35	.29	.11		.51				.38			.05					4.90	
<i>The Red Sandstone Plain.</i>																																	
Bayonne.....		.02	.08	.07	T.	1.44	.09	.05	.03	.12		.02		T.	.03	.62		.41	.25	.32				.33	T.	.01						3.89	
Bergen Point.....		.20		.07		1.52	.19	.05	T.	.17	T.			T.	.77		.50	.23	.39				.39			.03						4.51	
Boonton.....		.01	.32		.19	.20	1.70	.20	T.	.16	.01		.01		.03	.40	T.	.16					.15	.27		.03						4.35	
Chatham ||.....		.23				.52	1.28	.25	.06	.07	.10			.06				.43			1.96					.91						5.87	
Elizabeth.....		.05	.16	T.		1.40	.61	.06	.02	.15	T.		.13		T.	.07	.44	*	.47	.25		T.	.40	T.		T.						4.21	
Flemington.....		.03	.21			.92	.34	.04	.07	T.		.04			.11	.12	T.	.02	.41	.14		T.	.36	.17		.05		T.				3.03	
Highwood.....		.05	.11	.02		1.15	.50	.05		.15		T.		T.	.04	1.49	.17	1.00	T.	.50			.77	T.								5.99	
Jersey City**.....		.09		T.		1.59	.22	T.	.02	.22		.02		T.	.34	1.46	T.	.70		.30		T.	.34			.04						5.34	
Lambertville.....		.13				1.23	.24		.05		.11				.15	.16		.07	.09	.02				.27	.15		.06					2.73	
Little Falls**.....		.35		.12		1.40	.44	.06		.52		.64			.20	.31	.10	.58		.48				.56			T.					5.76	
Newark**.....		.13		T.		1.67	.24	.02	.05	.13		.08			.15	.89		.32		.23				.31			T.					4.22	
New Brunswick.....		.01	.18			1.33	.39	.10	.01	.27		.03	.04		.06	.18		.35	.13	.08				.23			T.					3.35	
Palisades Park.....		T.	.14	.02		1.14	.47	.04	T.	.17		T.		.02	*	1.95	.01	.55		.35			.42			.01						5.29	
Paterson.....		.06	.17	.07		1.12	.41	.05	.05	.57		.12			.08	.51	.05	.39	.12	.42		T.	.43			.01						4.63	
Plainfield**.....		.27				1.46	.33	.02	.02	.45		.05			.01	.19	.68	T.	.66		.27		T.	.28			.01	.10				4.80	
Pompton Plains ||.....		.06	.36		.05	.12	1.18	.26	.02	.06	.11		.03		.02	.39	.24	.02	.44		.51			.16	.28		.03					4.34	
Somerville.....			.21	.02		1.04	.16	.04	.04	.17		.11		T.	.14	.22	T.	T.	.57	.16		T.	T.	.25	.01		.05					3.19	
South Orange.....		.27		T.		2.00	.30	.05	T.	.57		T.		T.	T.	.82		.36		.31		T.	.28			.02						4.98	
New York, N. Y.***.....		.10		.02		1.27	.17	.01	.03	.24		T.		T.	.16	.56	T.	.87		.23		T.	.26			.02						3.94	
<i>The Southern Interior.</i>																																	
Bridgeton.....			.18		T.	1.00	.05	.05		.22					.18	.08		.22	T.	.48				1.35	.18							3.99	
Burlington.....		.42		.12		1.44	.14		.51	.03			.02		.08	.08		.15	.22	.49	.02			.26	.08							4.06	
Clayton.....			.07		.07	1.02	.07	.02		.01	.17				.10	.04			.24	.14	.01			1.87								3.83	
Hammonton.....		T.	.26			.25	1.00	.06	T.	T.	.03	.04	.02		.10	*		.01	.05	.31			1.07				T.					3.20	
Hightstown.....		.24				1.14	.13			.09		.17			*	.11		.50		.15				.26								2.79	
Imlaystown.....			.45			1.20	.10		T.	.10					T.	.08	.09		.20		.20			.25								2.30	
Indian Mills.....		.13	.38		.84	T.	.07	T.	.04		.06				T.	.08	.09		.20		.57			2.04				T.				4.50	
Lakewood.....		T.	.12	.12		1.71	.26	T.	T.	.06	T.	.24		T.	.06	.71		.68	.21	.32		T.	.88	T.				T.				5.37	
Moorestown.....		.10	.17			1.40	.15			.01	.04	.29			.14	.06		.23	.40	.26				.45								3.78	
Northfield.....		.19		.44	.57	.01			.01	.04	.29				.09	.15	.07	.38	.77	.14				.77								3.92	
Pleasantville.....																																	
Trenton***.....		.19		T.		1.51	.09	T.	.45	.10		T.		T.	.11	.09	T.	.08		.12		T.	.19	T.	T.	.01		T.				2.94	
Tuckerton.....		.16		.17	.67			.09	.07	.04					.03	.13	.74	.02	.10	.05	1.45				.57				T.			4.22	
Vineland.....		.15			.62	.04			.10					.01	.18	.03		.19		.54			.29			.07		T.				2.22	
Woodbine.....		.46			.77	.03	.06								.10			.38	.23		.05			.98		.03						3.09	
Philadelphia, Pa.***.....		.17		.11		1.68	.04	T.	T.	.01					T.	.09	.01		.17		.31			.24			T.		T.			2.83	
<i>The Sea Coast.</i>																																	
Asbury Park**.....		.04		.15		1.16	.19	.13	T.	.01					T.	1.05	.27		.45		.12	.01		T.	.59	.09	.02					4.28	
Atlantic City***.....		.18	.01	.12	.02	.33	.01		.02	.16	T.				.48	T.	.02	.31		.08				.02	.57							2.33	
Cape May City***.....		.47			.05	.22			.01	.14					.09	.02	.08	.09		.42				.05	1.47							3.11	
Long Branch**.....																																	
Sandy Hook***.....		.05		T.		1.21	.04	.01		.14		.01		T.	.41	.05		1.25		.05			T.	.25			.01					3.48	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded. || Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing. * Precipitation included in the next following measurement. **Precipitation for 24-hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.			Moisture.		Sun shin
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.		Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	
							Miles per hour.	Direction.				Date.
Atlantic City.....	29.96	30.18	1	29.65	3	s	24	se.	7	82	56
Asbury Park.....		30.12	1	29.68	3						
Cape May City.....	29.97	30.21	1	29.71	3	s	30	se.	7		
Long Branch.....											
Newark.....		30.06	1	29.70	3		36	nw.	22	73	48
New York, N. Y.....	29.94	30.15	1	29.65	3	14	53	se.	16	76	49
Palisade Park.....	29.94	30.16	1	29.67	3						
Philadelphia, Pa.....	29.96	30.19	1	29.62	3	10	30	e.	7	74	53
Sandy Hook.....	29.94	30.16	1	29.61	3	13	40	w.	19	86	51
Trenton.....	29.93	30.17	1	29.60	3	10	35	nw.	3	78	54

§ Two directions and dates

Daily temperature for June, 1916.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.
<i>The Highlands and Kittatinny Valley.</i>																																
Belvidere.....	78	81	75	76	80	76	69	63	60	62	62	76	81	75	.....	.....	.....	.....	.....	.....	.....	.....	70	72	79	85	85	.....	.....	.....	.....	.....
Charlotteburg.....	43	45	54	48	52	49	54	56	52	52	53	53	52	52	.....	.....	.....	.....	.....	.....	.....	50	.....	72	79	85	64	.....	.....	.....	.....	.....
Dover.....	79	79	74	73	76	74	69	56	57	58	57	74	77	68	65	65	80	78	78	75	73	70	72	75	72	79	79	80	79	81	.....	.....
Layton.....	41	36	52	50	46	42	53	52	51	48	50	53	54	49	51	49	61	46	53	52	43	48	46	49	55	55	60	62	51	58	.....	.....
Newton.....	78	78	70	77	79	76	60	58	55	59	57	76	79	69	57	64	80	80	74	76	66	73	74	75	73	81	79	81	82	81	.....	.....
Phillipsburg.....	43	43	50	49	51	46	53	53	52	49	51	54	54	52	50	51	57	51	56	51	47	47	49	55	58	58	65	63	58	59	.....	.....
Sussex.....	81	78	75	78	75	78	65	61	57	61	60	76	81	72	61	66	81	79	72	75	68	75	74	77	75	80	78	80	80	79	.....	.....
.....	33	39	53	48	48	47	55	54	53	50	52	51	53	52	53	52	53	56	59	53	51	51	51	51	58	62	58	65	63	55	61	.....
.....	43	47	48	45	55	54	54	53	50	52	51	50	54	53	53	50	64	80	77	78	74	64	71	72	75	79	80	78	80	80	79	.....
.....	76	77	73	76	75	73	68	56	58	59	59	74	78	69	60	64	80	77	78	74	64	71	72	75	79	80	78	80	80	79	.....	.....
.....	43	47	48	45	55	54	54	53	50	52	51	50	54	53	53	50	64	80	77	78	74	64	71	72	75	79	80	78	80	80	79	.....
.....	79	82	77	78	81	78	73	61	60	60	62	76	82	77	67	67	83	82	80	78	73	76	78	82	78	86	87	84	85	82	.....	.....
.....	47	46	55	48	53	51	55	54	54	52	53	53	53	53	53	53	56	59	53	51	51	51	51	58	62	58	65	63	55	61	.....	.....
.....	77	78	69	75	77	77	68	.....	56	61	60	73	77	71	59	66	81	78	71	74	68	71	72	77	73	83	81	81	80	81	.....	.....
.....	43	42	52	51	51	47	54	.....	54	50	50	53	52	48	55	52	63	52	57	51	47	47	51	53	57	57	65	65	52	57	.....	.....
<i>The Red Soulstone Plain.</i>																																
Bayonne.....	80	79	69	77	80	80	69	58	58	61	58	78	82	68	58	66	73	82	76	79	69	75	78	72	72	78	77	80	86	81	.....	.....
Bergen Point.....	50	54	60	54	57	56	55	56	54	52	53	54	57	56	54	62	61	62	57	54	52	56	58	63	63	64	65	60	63	.....	.....	
Boonton§§.....	76	80	71	76	81	76	67	58	57	61	57	76	79	69	58	67	77	83	76	77	67	74	76	76	72	79	78	81	83	79	.....	.....
Elizabeth.....	47	49	56	52	56	52	54	54	52	52	52	52	55	55	54	52	62	61	59	55	54	49	59	54	61	62	64	66	57	62	.....	.....
Flemington.....	80	79	.....	79	77	59	59	58	62	66	78	80	74	59	71	81	80	76	77	67	73	75	77	75	81	83	83	82	84	.....	.....	
Highwood.....	43	42	55	.....	49	55	56	53	50	51	52	52	50	53	52	57	51	55	56	45	52	54	52	57	57	57	63	63	64	54	58	.....
Jersey City.....	82	84	74	79	84	80	70	60	59	62	60	82	85	68	59	67	82	84	81	80	74	78	80	81	74	84	84	86	85	.....	.....	
Lambertville.....	47	47	58	49	52	51	58	54	54	52	54	52	56	55	55	54	62	58	59	54	49	49	55	61	63	65	65	56	58	.....	.....	
Little Falls.....	80	80	76	79	80	76	74	61	59	59	60	76	80	71	64	69	83	81	80	69	75	77	81	76	86	84	83	85	82	.....	.....	
Newark.....	45	47	60	50	52	49	56	55	54	52	54	52	57	55	56	54	64	55	59	55	51	50	51	57	63	60	65	65	57	61	.....	.....
New Brunswick.....	78	79	68	78	79	73	63	57	57	59	57	72	75	72	61	68	74	79	72	76	64	74	75	75	69	78	79	81	81	80	.....	.....
Palisades Park.....	43	45	58	50	55	49	54	54	53	51	52	54	51	54	53	53	63	61	57	55	48	46	49	51	61	60	65	65	55	58	.....	.....
Paterson.....	80	81	70	80	80	79	70	59	58	62	57	79	82	71	58	68	78	84	77	80	70	77	80	78	71	82	82	81	86	82	.....	.....
Plainfield.....	54	55	60	54	59	57	56	55	54	52	52	54	59	60	55	54	60	64	64	58	55	52	54	60	64	62	66	66	59	63	.....	.....
South Orange.....	78	79	73	77	83	.....	63	64	65	66	78	82	75	62	70	79	83	80	73	72	73	75	77	73	84	81	86	82	81	.....	.....	
Somerville.....	44	47	58	49	49	49	53	53	54	52	53	55	53	55	53	52	53	58	58	54	49	49	52	54	61	62	61	64	56	55	.....	.....
Trenton.....	81	79	71	77	80	76	64	56	55	55	57	79	69	58	65	71	81	77	77	65	73	76	75	71	80	79	84	82	83	.....	.....	
Union.....	52	55	58	54	58	57	52	54	53	50	51	53	59	55	52	53	61	61	63	57	53	51	55	63	63	65	65	55	62	64	.....	.....
Woodbury.....	76	80	74	76	80	76	69	58	56	60	58	76	79	74	62	69	82	82	82	79	77	76	74	75	78	72	79	82	82	80	.....	.....
Yonkers.....	45	48	57	52	54	54	54	53	52	52	54	57	56	54	53	53	53	59	59	56	52	49	51	56	62	63	65	65	57	61	.....	.....
.....	79	79	71	78	79	75	64	57	58	60	59	76	79	72	62	69	76	81	75	76	77	76	74	75	78	72	81	80	84	83	.....	.....
.....	40	46	56	51	54	49	54	54	53	50	52	54	53	53	52	53	63	60	58	51	47	47	48	52	63	62	63	60	56	58	.....	.....
.....	80	83	73	80	83	77	72	59	57	60	57	77	80	73	66	69	80	84	76	79	70	77	78	78	71	82	83	84	84	83	.....	.....
.....	49	52	57	52	57	54	55	54	53	52	52	55	56	54	54	53	63	58	60	55	51	51	53	56	60	62	65	66	60	63	.....	.....
.....	77	80	73	77	80	77	66	60	56	58	76	79	69	58	68	81	81	77	77	68	55	51	51	53	76	73	81	81	82	80	.....	.....
.....	46	47	56	51	53	51	55	55	54	52	54	51	55	54	53	62	58	59	55	51	50	49	57	62	62	66	65	68	61	.....	.....	
.....	78	79	74	77	80	78	74	62	59	61	62	77	80	71	65	69	82	83	80	79	76	76	79	78	84	85	84	84	81	.....	.....	
.....	43	44	56	50	49	47	55	54	52	51	62	48	53	51	54	54	63	54	55	54	47	47	44	54	60	60	63	63	53	58	.....	.....
.....	78	79	73	75	80	75	64	56	56	56	76	78	71	59	67	80	80	80	78	77	67	73	74	73	78	79	79	83	81	.....	.....	
.....	49	49	57	53	55	54	56	56	54	52	53	54	58	56	54	53	63	59	61	56	51	51	54	56	62	61	66	65	61	.....	.....	
.....	78	76	67	74	75																											



Scale of Shades.

- 0 to 2 inches.
- 2 to 4 inches.
- 4 to 6 inches.
- 6 to 8 inches.
- Over 8 inches.

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CLIMATOLOGICAL DATA

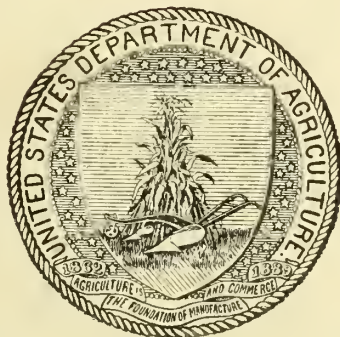
NEW JERSEY SECTION

JULY, 1916.

BY

G. HAROLD NOYES

METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
AUGUST 18, 1916.

Departure of the Mean Temperature from the Normal, July, 1916.



Shaded portions show excess (+).
Unshaded portions show deficiency (-).
Lines show amount of excess or deficiency.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYBS, Meteorologist.

VOL. XXIX. TRENTON, N. J., JULY, 1916. No. 7.

GENERAL SUMMARY.

New Jersey is not favorably situated, geographically, for particularly pleasant summer weather. With the barriers of hills in the northwestern part of the State and in Pennsylvania, cool, dry winds are measurably deflected away from the regions to the southeastward, and these same barriers serve to intensify the warm, humid breezes that move over the State from the ocean. These features tend toward oppressive weather in July, as was amply borne out by the weather of the mid-summer month of 1916. While temperatures averaged but slightly above normal, there were a few sections that were below normal in warmth and in moisture also. In the majority of districts, however, there was an excess of heat, moisture, and cloudiness, any one of which features would conduce to much personal discomfort. There were but few instances of consecutive dry days, the principal ones being those commencing on the 6th and 28th, and these also were the coolest periods of the month.

The weather was more than ordinarily favorable for the growth of vegetation, which flourished admirably, but the lack of sunshine and the frequency of rain rendered the capturing of hay and grain crops in good condition rather fortuitous. The high temperature and humidity were undoubtedly contributing factors to the development of insect and fungus enemies of plant life, and possibly later knowledge may disclose an analogy between the weather conditions and the high infant mortality that have prevailed.

There were many thunderstorms during the month, with damaging results from lightning, and very heavy falls of rains in the headwaters of the Delaware River on the 25th and 26th resulted in a sudden rise in the river that became dangerous for campers and others temporarily located along the shores of the river above tidewater.

The mean stage of the Delaware River at Phillipsburg was 2.7 feet, the highest readings being 12.0 feet on the 27th. At Trenton the mean stage was 2.2 feet, which was 1.2 feet above the ten-year normal and the highest July mean stage on record; the highest reading was 7.3 feet on the 27th.

TEMPERATURE.

The monthly mean temperature, as deduced from observations of 40 stations, was 74.4°, which was 0.7° above normal. The warmest station was Bridgeton, and the coldest Asbury Park. The highest temperature in the State was 97° at Elizabethton on the 13th, and the lowest 45° at Charlotteburg on the 1st. The greatest daily range of temperature was 41° at Layton on the 7th, and the greatest range of mean temperature was but 5°.

PRECIPITATION.

The average precipitation of the State, as deduced from observations of 46 stations, was 5.40 inches, which was 0.58 inch above normal, and about the same as in July last year. The greatest monthly amount was 9.01 inches at Chatham, and the

least, 3.15 inches at Little Falls; these extremes, therefore, occurring within 13 miles of each other. The greatest amount in 24 consecutive hours was 5.25 inches at Chatham on the 26th-27th. A large majority of stations had more than an inch of rain in 24 hours. The average number of days on which 0.01 inch or more precipitation fell was 12, which was 2 above normal.

WIND.

The prevailing wind direction was from the southwest in practically all portions of the State, with an approximate velocity of 11 miles per hour, which was somewhat higher than usual. The highest velocity, sustained for 5 consecutive minutes, was 48 miles per hour from the north on the 20th, at Sandy Hook.

SUNSHINE AND CLOUDINESS.

The average number of clear days for the month was 11, or 1 less than normal; partly cloudy, 9, or 3 less than normal; cloudy, 11, or 4 more than normal. Sunshine averaged 50 per cent. of possible, which was somewhat less than usual.

MISCELLANEOUS.

Atmospheric pressure, reduced to sea level, averaged 30.00 inches, which was 0.02 inch above normal. Occurrences of thunderstorms ranged from 1 on the 22d in southwestern districts to 10 in northwestern portions of the State. The principal dates on which dense fog occurred were: 11th, 15th, 16th, 18th, 19th, and 24th. Hail occurred in scattered localities on the 13th. Solar halos were observed at Atlantic City on the 1st and 8th.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more prec.
1885.....	75.2	100	44	3.50	7.28	1.29	.....	.....	.....	.....
1886.....	73.0	98	48	4.91	7.95	2.98	.....	.....	.....	.....
1887.....	77.1	102	54	7.67	15.29	1.95	.....	.....	.....	11
1888.....	71.1	95	45	3.50	7.03	1.25	.....	.....	.....	9
1889.....	73.4	95	48	10.19	18.58	4.66	.....	.....	.....	13
1890.....	72.5	101	39	5.62	7.55	3.60	.....	.....	.....	14
1891.....	70.1	95	43	5.30	9.41	3.03	12	11	8	9
1892.....	74.3	105	44	4.03	7.96	2.38	10	11	10	12
1893.....	73.9	102	40	2.72	4.63	1.26	12	14	5	8
1894.....	75.7	106	44	1.66	5.00	0.15	14	13	4	8
1895.....	70.9	99	41	4.26	7.73	1.53	12	12	5	6
1896.....	75.0	98	47	5.50	13.29	2.45	13	10	7	10
1897.....	74.1	102	50	11.42	20.80	6.11	10	8	13	15
1898.....	75.3	107	38	4.96	11.72	2.23	10	11	10	13
1899.....	74.7	98	38	5.75	9.02	3.34	11	13	7	10
1900.....	75.9	104	42	4.74	7.21	1.11	15	12	4	11
1901.....	77.3	107	45	5.87	10.92	1.89	9	13	9	14
1902.....	73.0	100	43	4.78	9.92	1.83	10	12	9	13
1903.....	73.3	100	38	5.51	10.14	3.08	16	10	5	12
1904.....	72.3	98	42	4.87	8.06	2.41	13	10	8	13
1905.....	74.4	102	42	4.06	8.19	1.67	12	13	6	12
1906.....	72.8	94	46	5.58	13.25	3.44	11	14	6	12
1907.....	73.6	96	40	2.62	6.42	0.95	8	12	11	8
1908.....	75.6	106	42	4.70	8.12	1.97	12	13	6	9
1909.....	71.6	99	37	2.12	4.03	1.03	14	14	3	5
1910.....	75.3	99	42	1.39	5.33	0.22	12	12	7	5
1911.....	76.0	104	42	3.64	6.46	2.06	12	12	7	8
1912.....	73.7	100	36	3.86	9.91	1.01	14	10	7	9
1913.....	74.4	100	41	2.52	4.72	1.50	20	9	2	8
1914.....	71.5	97	40	6.05	8.57	1.94	9	11	11	15
1915.....	72.8	98	44	5.31	11.06	2.23	10	13	8	14
1916.....	74.4	97	45	5.40	9.01	3.15	11	9	11	12

ERRATA.

July, 1915.—Page 52, Bergen Point, greatest daily range, 31°, should read 27°; Imlays town, date of the minimum temperature, 27, should read 17; Indian Mills, date of the minimum temperature, 35, should read 25.

August, 1915.—Hightstown, mean temperature, 71.2°, should read 71.4°; departure, -0.7°, should read -0.5°; mean maximum temperature, 81.2°, should read 81.4°; Woodbine, precipitation departure, -2.18, should read +2.18; Little Falls, total precipitation on page 61, 8.77, should read 8.70.

December, 1915.—Tuckerton, date of the maximum temperature, 18, should read 18; page 93, Layton, total precipitation, 4.53, should read 5.53; Layton, mean maximum temperature, 35.2°, should read 35.3°; New Brunswick, mean minimum temperature, 24.0°, should read 24.4°.

Comparative data tables July to December, inclusive, 1915, headings of columns "cloudy" and "partly cloudy" should be interchanged.

Climatological data for July, 1916.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.				Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation, .01 in. or more.	Clear.	Pt. cloudy.		Cloudy.	Prevailing direction of wind.
The Highlands and Kittatinny Valley.																				
Belvidere.....	Warren.....	289	25	74.8	+2.1	93	13	52	1†	37	6.26	+0.66	1.24	0	10	18	4	9	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	24	71.8	+2.3	91	21†	45	1	40	5.08	+0.20	.....	0	8	15	14	2	sw.	George S. Briggs.
Culvers Lake††.....	Sussex.....	848	15	.....	.....	.....	.....	46	6	.....	7.45	+2.69	2.35	0	13	16	6	9	e.	Brice E. Riker.
Dover.....	Morris.....	600	32	72.6	+1.2	92	12†	50	1	36	5.41	-0.07	.....	0	14	0	13	18	.....	William C. Harris.
Layton.....	Sussex.....	480	16	73.6	+3.4	94	31	47	1	41	4.43	0.00	1.26	0	15	13	9	9	sw.	A. M. Dupue.
Newton.....	Sussex.....	769	35	73.2 ^a	+1.3	90	12†	51	6	31	6.06	+1.36	1.66	0	14	15	7	9	sw.	Irving G. Kern.
Phillipsburg.....	Warren.....	363	34	75.6	+1.6	94	12†	53	1	35	7.87	+3.02	2.03	0	13	14	7	10	s.	D. Wilson Smith.
Sussex.....	Sussex.....	442	26	73.4	+1.7	92	31	51	6	36	7.01	+2.49	2.47	0	11	11	10	10	s.	George Dymock.
Means and extremes.....				73.6	+1.9	94	12†	45	1	41	6.20	+1.29	2.47	0	12	13	9	9	sw.	
The Red Sandstone Plain.																				
Bayonne.....	Hudson.....	50	26	74.9	+0.5	94	31	58	1†	30	5.39	+0.26	1.80	0	16	11	7	13	se.	Erskine R. Eadie.
Bergen Point††.....	Hudson.....	37	19	74.4	+1.0	93	13†	57 ^a	29	27	5.85	+0.34	2.32	0	12	5	20	6	se.	William H. Mitchell.
Boonton.....	Morris.....	400	26	73.6	.....	93	31	49	1	34	4.21	-1.25	1.59	0	12	20	3	8	sw.	J. W. Demmers.
Chatham.....	Morris.....	330	14	.....	.....	.....	.....	.....	.....	.....	9.01	+3.73	5.25	0	10	17	2	12	.....	Miss M. A. Butler.
Elizabeth.....	Union.....	45	37	75.8	+0.3	97	13	53	1	38	5.23	-0.03	2.00	0	12	6	11	14	se.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	28	75.5	+1.6	96	31	55	6	34	5.47	+0.51	1.25	0	12	12	10	9	sw.	Hiram E. Deats.
Highwood.....	Bergen.....	90	27	72.6	+0.1	91	8†	52	1†	34	3.95	-1.42	0.97	0	16	5	11	15	se.	Charles J. Bates.
Jersey City.....	Hudson.....	10	17	76.4	+1.7	96	31	60	6	30	4.37	-0.41	1.15	0	13	8	15	8	sw.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	29	75.8	+1.3	91	13†	56	6	28	5.30	+0.26	1.09	0	12	7	15	9	sw.	Samuel W. Cochran.
Little Falls.....	Passaic.....	180	13	75.2	.....	95	12†	54	1†	34	3.15	-2.44	0.85	0	15	8	6	17	w.	Montclair Water Co.
Newark.....	Essex.....	159	74	74.6	+0.3	95	31	59	6†	27	3.76	-0.97	1.02	0	12	7	6	18	s.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	110	63	74.2	-0.1	93	12	56	1†	29	6.96	+1.91	1.99	0	11	15	9	7	e.	N. J. Experiment Station.
Palisades Park.....	Bergen.....	80	1	73.4	.....	94	31	52	29	36	5.28	.....	1.57	0	13	8	12	11	s.	George F. Kirsten.
Paterson.....	Passaic.....	80	45	75.4	+1.1	95	13†	53	30	31	4.02	-1.31	0.78	0	16	3	19	9	sw.	Heber A. Probert.
Plainfield.....	Union.....	100	30	74.2	+0.3	93	13†	54	1	33	6.80	+1.40	1.86	0	14	7	9	15	sw.	John Neagle.
Pompton Plains.....	Morris.....	195	14	.....	.....	.....	.....	.....	.....	.....	7.33	+1.78	1.81	0	13	.....	.....	.....	.....	M. S. Taylor
Somerville.....	Somerset.....	60	34	74.1	+0.2	94	12†	52	6	35	8.75	+3.62	2.83	0	13	8	8	15	sw.	A. A. Macdonald.
South Orange.....	Essex.....	200	46	74.2	+1.1	93	31	57	29	27	4.21	-0.91	0.74	0	11	7	9	15	w.	Dr. W. J. Chandler.
New York, N. Y.....		365	46	73.8	+0.3	93	31	59	5	23	3.44	-1.10	0.83	0	14	4	9	18	s.	U. S. Weather Bureau.
Means and extremes.....				74.6	+0.7	97	13	49	1	38	5.50	+0.30	5.25	0	13	9	10	12	sw.	
The Southern Interior.																				
Bridgeton.....	Cumberland.....	30	35	76.6	-0.5	95	12†	56	5†	27	5.24	+0.81	1.80	0	8	17	4	10	sw.	Henry A. Jorden.
Burlington.....	Burlington.....	12	30	76.0	+0.7	94	12†	57	6	32	8.18	+3.15	2.45	0	13	19	4	8	sw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	24	75.8	-0.2	92	13†	53	6	34	5.65	+1.38	1.36	0	11	12	10	9	s.	George L. Wilson.
Hammononton.....	Atlantic.....	103	15	.....	.....	.....	.....	.....	.....	.....	6.48	+1.79	2.00	0	9	10	10	11	.....	Frederick H. Hoefler.
Hightstown.....	Mercer.....	140	24	74.7	+0.7	94	13	52	2	34	5.08	-0.89	1.28	0	14	17	1	13	sw.	Leon Dunbar.
Imlaystown.....	Monmouth.....	185	28	73.6 ^a	-1.6	92	8	54	6	31	3.85	-1.17	1.00	0	9	.....	.....	.....	w.	H. E. Bullock.
Indian Mills.....	Burlington.....	76	27	74.6	-0.5	94	12	52	1†	37	6.35	+2.29	1.58	0	9	11	10	10	sw.	James M. Armstrong.
Lakewood.....	Ocean.....	54	13	74.0	+1.1	94	13	52	29	35	4.00	-1.03	1.01	0	11	6	10	15	sw.	R. W. Holman.
Moorestown.....	Burlington.....	75	54	75.9	+1.1	92	13	57	5†	23	5.42	+0.84	1.33	0	10	15	11	5	sw.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	9	.....	.....	.....	.....	.....	.....	.....	5.09	.....	1.47	0	11	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	18	.....	.....	.....	.....	.....	.....	.....	4.62	+0.48	1.09	0	11	16	5	10	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	45	74.9	+0.4	92	31	58	6	26	5.94	+1.17	1.09	0	16	3	10	18	sw.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	23	74.8	+0.7	92	12†	52	5	34	6.76	+2.86	2.54	0	11	11	13	7	sw.	Frank R. Austin.
Vineland††.....	Cumberland.....	87	48	75.7 ^b	-0.7	91	12†	55	5†	30	5.38	+0.87	1.66	0	9	.....	.....	.....	s.	E. V. C. Hendrickses.
Woodbine.....	Cape May.....	43	25	75.5	+1.6	92	13	54	30	28	3.21	-0.81	1.10	0	8	11	12	8	sw.	Baron de Hirsch Agr. Sch.
Philadelphia, Pa.....		117	46	76.8	+1.0	95	31	62	6	23	3.40	-0.93	1.08	0	10	5	10	16	sw.	U. S. Weather Bureau.
Means and extremes.....				75.2	+0.2	95	12†	52	1†	37	5.42	+0.84	2.54	0	11	12	9	10	sw.	
The Sea Coast.																				
Asbury Park.....	Monmouth.....	22	27	71.6	-1.3	92	12†	58	6†	28	4.24	-1.01	1.10	0	10	13	6	12	s.	Wilbur H. Pancoast.
Atlantic City.....	Atlantic.....	16	43	72.4	-0.1	91	31	60	5	24	4.27	+0.49	1.27	0	11	8	7	16	sw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	32	73.9	+0.5	88	31	59	6	23	3.55	-0.23	1.06	0	9	10	9	12	s.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	9	72.9	.....	94	31	59	5	23	3.42	.....	0.80	0	14	9	11	11	s.	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	18	73.6	-0.3	90	13	60	5	24	3.23	-1.55	0.96	0	12	5	10	16	s.	U. S. Weather Bureau.
Means and extremes.....				72.9	-0.3	94	31	58	6†	28	3.74	-0.58	1.27	0	11	9	8	14	s.	
For the State.....				74.4	+0.7	97	13	45	1	41	5.40	+0.58	5.25	0	12	11	9	11	sw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

* Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Vineland is South Vineland.

Daily precipitation for July, 1916.

Stations.	Day of month.																															Total.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>The Highlands and Kittatinny Valley.</i>																																	
Belvidere.....			1.00							.63	.09		.77	.35			.73				.38	.26			1.24	.81							6.26
Charlotteburg.....									.61	.96			.80				.70			*	.26	.47			*	1.28							5.06
Culvers Lake.....		.65	T.	.02					1.51	.22	.43			.07			.35				.04	.18			.85	.43	2.35	.35			T.		7.45
Dover.....		.19							.40	*	.20	*	.85				.22			*	.31	.18			1.42	*	1.63					.01	5.11
Layton.....		.37	.02	T.					.23	.19	.51	.36	.28	.05			.04	.02			.12				.90	1.26	.03					.05	4.43
Newton.....		.80	.09						1.07	.13	1.66	.16		.70			.08				.16	.09	.08	T.	.47	.25		.32					6.06
Phillipsburg.....		1.01							.04	.69	.03		1.80	.17			.43				.19	.53			1.31	1.26	.38	.03					7.87
Sussex.....		.54							.41		.52	2.47	.25				.02	.29			.22				.99	.30	1.00						7.01
<i>The Red Sandstone Plain.</i>																																	
Bayonne.....		.27		.03						.20	.01		1.80	.13			.06			.01	.61	.78	.02		.40	.68	.02	.33			.04		5.39
Bergen Point.....		.31		T.				.27	.03			2.32	.13			T.	T.		.30	*	1.30			.44	.03	.52	.20						5.85
Boonton.....		.10							.20	.19	T.	.01	.71			T.	.23				.25	.02	.45		.159	.45	.01						4.21
Chatham II.....		.10							.28	.40			.67				.06				.17	.23	.15		1.70	5.25							9.01
Elizabeth.....		.31						T.	.27				1.35	.65		T.	.08			*	.21	.38	.10	T.	.64	1.21	.03				T.		5.23
Flemington.....		.18		T.					.58				.94	.20			.95	.02		.19	.29	.14			1.25	.33	.40						5.47
Highwood.....		.31		.01				.01	.10	.13			.92	.05			.15			.01	.45	.11	.22		.45	.20	.64	.19					3.95
Jersey City**.....		.13	.05	.02					.22				1.15				.05		*	.77	.30	.03		.39	1.00	.26							4.37
Lambertville.....		.39							.45			.91	.76				.42	.38		.07	.22	.27			1.09	.11	.23						5.30
Little Falls**.....		.10	.25					.16	.18	.09			.61	.02			.03			.12	.11	.15	.04		.85	.40	.04						3.15
Newark**.....		.11	.05		T.				T.	.26	T.		.63				.02			.04	.13	.25	.01		.81	1.02	.43				T.		3.76
New Brunswick.....		.53			T.				.63				T.	1.26			.44			T.	.25	.80	.57		.25	.07	1.99	.17					6.96
Palisades Park.....		.35		.02					T.	.14	.10		.73	.28			.15				.80	.11	.04	T.	.70	1.57	.29						5.28
Paterson.....		.30		.03				.70	.08	.14			.24	.45		T.	.18			.01	.15	.03	.08		.61	.32	.40	.30					4.02
Plainfield**.....		.15	.33	.01					.33				1.55	.10			.10			.09	.14	.50	.22		1.40	1.86	T.				.02		6.80
Pompton Plains II.....		.19							1.81	.37	.02		.01	.54				.84			.26	.06	1.01			.89	1.29	.04					7.33
Somerville.....		.20							.63				.83	.38			.32	.73		1.03		.30	.19		1.09	.22	2.77	.06					8.75
South Orange.....		.26		T.					T.	.30	.05		.42	.03			T.			T.	.47	.21	.74		.50	.70	.53	T.			T.		4.21
New York, N. Y.***.....		.07	.10	.09					T.	.15			.82	.01			.01			.22	.32	.41	.03		.32	.57	.32						3.44
<i>The Southern Interior.</i>																																	
Bridgeton.....									1.60				.34							.48	.02	1.80	.05		.90	.05							5.24
Burlington.....		.05							.68			.03	.19	.86	.47		2.45			.10	.45	1.00	.45		1.17	.28							8.18
Clayton.....		.05							.80				1.36	.01					.10	.14	.28	.30	.81		.83	.88	.14						5.65
Hammonton.....				T.					.95				1.46	.05	T.		T.			.18	1.15	2.00	.07	*	.62								6.48
Hightstown.....		1.28		.02					.33		.16	.35	.33	.61			.42			.05	.27	.04	.13		.99	.10				T.	T.		5.08
Mayaville.....		1.00							.50				.80	.20					.10	.30			.30		.55	.10							3.85
Indian Mills.....				T.					.58				1.28				.43		T.	.12	1.38	.13	1.58		.74	.11							6.35
Lakewood.....		.23		T.					.44	.02				.77			T.			.04	.97	.17	.47	T.	.38	.42	.09						4.00
Moorestown.....									.90				1.33	.05			.43			.05	.52	.51	.05		1.28	.30							5.42
Northfield.....		.10		.01					1.01				.18	.03						.31	1.47	.06	.88		.96	.08							5.09
Pleasantville.....		.02		.01					1.09				.34	.02						.38	.97	.06	.79		.89	.05							4.62
Trenton***.....		.24	.72	.01				.08	.27		.06	.53	.18	T.	T.	1.09				.43	.14	.57	.05		.85	.71	T.				.01		5.94
Tuckerton.....			.08	.02					.90				2.54						.30	.45	.03	1.56		.78	.03	.07							6.76
Wineland.....									1.39	.01			.09						T.	.32	.48	.25	1.66		.63	.55							5.38
Woodbine.....									1.10				.04							.23	.90	.26	.25	T.	.35	.08							3.21
Philadelphia, Pa.***.....		T.		T.					T.	.59	T.		1.07	.01	T.	T.	.02		.01	.20	.07	.54	.02		.87	T.							3.40
<i>The Sea Coast.</i>																																	
Asbury Park**.....		1.10		T.					.03	.26			.54	.03			T.			.36	.30	.16	1.01	T.		.45	T.				T.		4.24
Atlantic City***.....		.03		.11					.06	.87			.02	.03	T.					.77	.51	.06	1.12	T.	.69	T.							4.27
Cape May City***.....				T.					.08	.79									.49	.46	.11	.48	.08		.34	.72		T.					3.55
Long Branch**.....		.07	.10	.07					T.	.16			.79	.01			.02			.23	.32	.41	.03		.32	.59	.30						3.42
Sandy Hook***.....		T.	.81		T.					.13			.63	.33			T.			.07	.22	.43	.09		.23	.26	.01	.02					3.23

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded.

|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.

* Precipitation included in the next following measurement. ** Precipitation for 24-hour period from midnight to midnight. T, Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.				Moisture.		Sun- shine
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	Percentage of possible sunshine.
							Miles per hour.	Direction.	Date.			
Atlantic City.....	30.03	30.34	29	29.60	3	8	32	ne.	20	85	86	62
Asbury Park.....	30.03	30.36	29	29.62	3							
Cape May City.....	30.04	30.32	29	29.67	3	9	24	ne.	28			
Long Branch.....	29.99	30.36	29	29.53	3	13	42	sw.	13			53
Newark.....							36	n.	3	*72	68	
New York, N. Y.....	30.00	30.34	29	29.55	3	13	60	sw.	13	82	77	50
Palisade Park.....	29.99	30.39	15	29.55	3							
Philadelphia, Pa.....	30.02	30.34	29	29.59	3	9	29	ne.	20	80	72	51
Sandy Hook.....	30.00	30.35	29	29.55	3	12	48	n.	20	87	85	43
Trenton.....	30.00	30.32	29	29.56	3	10	36	w.	13	83	76	50

Daily temperature for July, 1916.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.	
<i>The Highlands and Kittatinny Valley.</i>																																	
Belvidere.....	Maximum ...	86	87	86	70	70	86	90	91	77	75	90	92	93	83	79	81	81	87	87	85	91	83	90	85	79	84	90	78	80	83	92	84.5
	Minimum ...	52	56	62	60	60	52	53	68	66	63	67	70	71	64	64	64	68	68	67	68	70	67	70	70	71	72	73	70	56	62	75	65.1
Charlotteburg.....	Maximum ...	85	85	80	79	69	85	90	90	87	74	88	90	89	80	76	77	80	83	82	85	91	87	83	80	75	82	89	81	78	81	91	83.0
	Minimum ...	45	49	61	59	56	49	50	54	62	62	64	69	68	68	55	54	67	64	55	63	67	65	68	66	66	69	70	65	46	55	71	60.7
Dover.....	Maximum ...	85	84	83	77	70	85	90	91	74	75	87	92	92	80	74	79	81	83	85	85	88	80	84	76	73	83	86	76	78	81	92	82.2
	Minimum ...	50	53	63	60	57	52	63	63	62	69	76	69	65	60	60	68	66	59	62	69	66	70	69	69	71	71	59	52	59	72	63.1	
Layton.....	Maximum ...	86	85	82	75	70	86	91	91	77	80	89	89	85	75	81	79	86	88	87	92	84	90	86	78	83	90	80	78	82	94	84.1	
	Minimum ...	47	51	62	63	58	57	50	56	61	65	69	69	70	67	66	59	68	66	62	66	70	67	66	67	68	67	71	68	56	59	66	63.1
Newton.....	Maximum ...	79	82	79	74	...	82	89	87	84	75	...	90	85	87	73	75	80	83	85	84	89	80	85	88	80	86	84	76	...	80	90	82.5 ^a
	Minimum ...	53	...	58	61	60	51	...	61	65	61	67	66	65	66	60	63	63	63	...	66	70	62	68	68	70	70	62	66	...	61	75	63.8 ^a
Phillipsburg.....	Maximum ...	87	86	84	78	72	87	92	93	90	77	92	94	84	85	74	83	82	88	88	92	84	90	84	76	83	91	84	81	83	93	85.6	
	Minimum ...	53	57	63	61	60	54	57	62	66	63	71	70	70	69	64	64	68	70	63	69	71	68	70	71	71	72	73	70	57	63	71	65.5
Sussex.....	Maximum ...	85	84	81	73	70	84	88	90	85	78	88	88	89	85	74	80	80	85	86	88	90	82	88	82	77	80	88	79	80	81	92	83.3
	Minimum ...	49	55	63	61	58	51	54	61	64	65	68	70	70	68	59	60	68	66	61	67	69	67	68	69	69	69	68	63	54	61	69	63.4
<i>The Red Sandstone Plain.</i>																																	
Bayonne.....	Maximum ...	88	87	86	81	68	86	93	92	86	74	89	92	93	81	73	75	79	80	85	85	86	79	81	79	76	84	82	78	76	82	94	82.9
	Minimum ...	58	64	66	59	61	59	63	69	67	64	70	73	69	69	63	62	69	70	66	72	71	70	72	70	71	72	72	69	58	64	72	66.9
Bergen Point.....	Maximum ...	84	87	84	76	68	83	90	92	77	77	88	92	93	81	72	77	81	82	85	86	85	83	82	79	77	86	80	76	83	93	82.7	
	Minimum ...	62	61	65	61	61	...	68	65	63	66	69	72	70	67	62	61	67	68	68	70	68	68	69	69	68	71	67	57	60	69	66.0 ^a	
Boonton§§.....	Maximum ...	82	83	84	76	75	86	91	90	76	73	87	90	90	85	78	78	85	85	88	89	90	83	88	78	78	83	90	84	81	84	93	84.0
	Minimum ...	49	53	64	56	58	58	57	60	63	63	65	70	70	69	58	60	64	66	57	67	69	67	69	68	67	70	72	68	51	62	70	63.2
Elizabeth.....	Maximum ...	90	88	87	82	71	90	94	95	85	76	91	96	97	82	76	81	85	87	90	86	90	83	86	88	79	88	90	84	80	83	95	86.3
	Minimum ...	53	57	65	60	61	54	56	69	66	65	68	71	69	69	62	60	68	69	64	71	70	68	73	71	70	72	72	67	54	61	71	65.4
Flemington.....	Maximum ...	88	85	84	78	72	87	92	92	87	77	90	94	93	82	72	82	82	87	88	84	87	81	87	81	77	84	92	83	74	85	96	84.6
	Minimum ...	56	59	65	61	58	55	58	64	67	63	71	70	73	70	65	64	70	70	62	71	72	69	73	72	72	73	73	70	57	63	71	66.4
Highwood.....	Maximum ...	86	85	81	74	68	82	90	91	75	75	86	89	90	77	73	79	78	83	85	83	85	79	80	76	75	79	84	76	77	80	91	81.0
	Minimum ...	52	55	65	59	59	54	56	62	66	65	67	72	70	69	59	57	68	68	61	70	70	69	72	68	68	71	72	65	52	60	70	64.2
Jersey City.....	Maximum ...	86	88	86	82	70	88	94	93	80	75	89	93	95	84	75	81	85	88	81	88	82	83	78	77	86	85	80	78	84	96	84.4	
	Minimum ...	63	65	66	63	61	60	64	69	69	65	70	74	73	71	63	68	70	70	68	72	71	72	72	72	72	73	73	70	62	63	74	68.3
Lambertville.....	Maximum ...	84	85	83	81	76	84	88	89	82	78	89	90	91	84	76	82	82	86	87	82	82	82	85	84	70	83	90	87	81	83	91	84.1
	Minimum ...	59	60	66	64	59	56	60	66	70	64	72	73	75	71	67	65	71	71	65	72	71	69	72	72	72	73	73	71	59	65	71	67.5
Little Falls.....	Maximum ...	85	88	86	77	74	81	90	89	80	81	91	95	94	85	80	83	88	85	88	87	91	85	87	84	79	88	90	83	81	85	95	85.6
	Minimum ...	54	54	65	61	60	65	66	60	63	65	68	73	71	66	60	59	60	59	58	69	70	69	70	68	68	73	71	60	62	68	73	64.8
Newark.....	Maximum ...	86	86	84	76	69	86	92	92	76	74	89	93	92	78	73	76	82	82	86	83	87	81	82	75	75	83	86	77	77	83	95	82.5
	Minimum ...	61	64	65	63	60	59	66	69	67	66	69	71	70	65	62	62	68	69	65	70	69	70	72	71	70	71	70	66	59	63	74	66.6
New Brunswick.....	Maximum ...	81	85	84	78	72	84	90	91	86	77	88	93	92	81	71	81	82	82	82	82	84	81	81	79	76	83	87	83	75	82	92	82.8
	Minimum ...	56	58	65	61	57	56	61	65	64	63	69	72	74	69	63	60	67	69	63	70	71	68	71	70	73	72	69	58	60	70	65.6	
Palisades Park.....	Maximum ...	87	86	84	75	70	86	92	92	73	80	88	90	93	77	76	75	83	85	86	85	87	85	81	80	78	85	86	80	81	94	83.2	
	Minimum ...	54	58	66	59	58	55	56	62	65	65	69	71	69	62	58	57	68	64	62	71	70	69	71	66	68	72	66	59	52	59	70	63.6
Paterson.....	Maximum ...	87	88	86	78	68	88	93	94	86	76	90	92	95	80	77	79	82	86	88	86	89	83	89	79	77	85	86	80	79	83	95	84.6
	Minimum ...	57	59	66	61	61	58	62	68	68	64	69	74	73	70	61	61	69	69	63	71	71	69	72	71	71	71	71	69	56	53	73	66.1
Plainfield.....	Maximum ...	84	86	83	79	71	84	90	91	81	76	88	92	93	81	72	80	83	82	84	83	86	80	82	79	76	85	86	80	76	82	93	82.8
	Minimum ...	54	56	65	62	58	57	57	63	68	64	69	71	72	68	63	61	69	69	64	72	71	69	72	71	71	72	72	70	56	61	71	65.7
Somerville.....	Maximum ...	87																															



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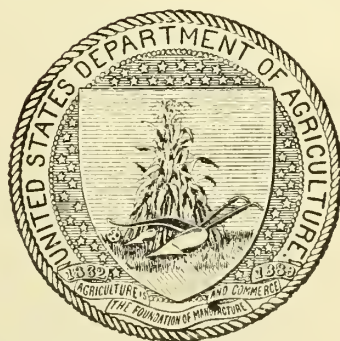
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CLIMATOLOGICAL DATA

NEW JERSEY SECTION

AUGUST, 1916.

BY
G. HAROLD NOYES
METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
SEPTEMBER 19, 1916.

Departure of the Mean Temperature from the Normal, August, 1916.



Shaded portions show excess (+).
Unshaded portions show deficiency (-).
Lines show amount of excess or deficiency.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

VOL. XXIX. TRENTON, N. J., AUGUST, 1916. No. 8.

GENERAL SUMMARY.

The weather of August, 1916, was nearly a direct inversion of that of last year. While the heat was not particularly noticeable, there were few periods in the month when it was below normal in temperature. The hottest days, the 21st, 22d, and 23d, were more than 10° above normal and contributed appreciably toward the excess of heat of the whole month. No August since 1885, when State averages were first compiled, has there been so little rain, the record for this year being 1.34 inches. This dry weather seemed more than ordinarily accentuated, owing to the comparison with the 7.73 inches which occurred in August last year. On the 8th and 23d, with the lowest barometer readings of the month, most of the rain occurred, and the oppressiveness from moist heat was marked. Thunderstorms were reported on these dates throughout the State. Such periods as these, that stand out with so much prominence in a month of otherwise unusually pleasant weather, may have considerable pathological bearing on respiratory afflictions.

There was an average deficiency in precipitation of over three and a half inches, and this resulted in a considerable loss in crop production. Crop growth thrives in comparatively narrow limits. Variation in weather conditions and deviations from normal temperature in August are less potent in effect than those of rainfall. August is normally the most rainy month of the growing season in this State and vegetation is therefore acclimated to this normal. The unfavorable effect of the dry weather of this month was, however, partly mitigated by a surplus of rain that fell in July, which is ordinarily nearly as rainy as August. At Phillipsburg the month was the driest in 33 years, and the warmest in 25 years, with two exceptions. At South Orange it was the least rainfall in 46 years, except in 1881, when it was 12 inch. At Newark it was the lowest August precipitation in 74 years from 1843 to date.

The mean stage of the Delaware River at Phillipsburg was 1.7 feet, the high water being 4.0 feet on the 1st. At Trenton the mean stage was 1.1 feet, which was 0.3 foot above normal; the highest was 2.8 feet on the 1st, steadily decreasing thereafter to the lowest of 0.3 foot on the last two days of the month.

TEMPERATURE.

The monthly mean temperature, as deduced from observations at 36 stations was 73.2°, which was 1.4° above normal. The highest mean occurred at Bridgeton, and the lowest at Charlotteburg. The highest temperature in the State was 100° at Bridgeton, Indian Mills and Somerville on the 22d, and the extreme west, 40°, at Charlotteburg and Culvers Lake on the 29th. The greatest daily range of temperature was 45° at Boonton on the 21st. Temperatures above 90° occurred at least once at every station in the State.

PRECIPITATION.

The average rainfall for the State, as deduced from observations of 43 stations, was 1.34 inches, which was 3.56 inches be-

low normal. The greatest monthly amount was 4.15 inches at Lakewood, more than half of which, or 2.24 inches, occurred in the thunderstorm of the 23d, and which was also the greatest amount in any 24 consecutive hours throughout the State. The least rain was 0.27 inch at Newark. The average number of rainy days (on which 0.01 inch or more rain fell) was 6, which was 4 fewer than normal. Nearly all the rain fell in thunder-showers.

WIND.

The prevailing wind direction was from the southwest, with an approximate hourly velocity of 9 miles, which was slightly less than usual. The highest velocity, sustained for 5 consecutive minutes, was 47 miles per hour from the north, at Sandy Hook on the 28th.

SUNSHINE AND CLOUDINESS.

The average number of clear days for the month was 20, which was 7 above normal; partly cloudy, 7, which was 4 below normal; cloudy, 4, which was 3 below normal. Sunshine averaged about 70 per cent. of the possible amount, and this was considerably in excess of normal.

MISCELLANEOUS.

Atmospheric pressure, reduced to sea level, was 30.00 inches, which was normal. Dense fog occurred very generally on the 16th and 17th; along the Delaware on the 26th; and in southern districts on the 4th and 5th. Lunar halos were observed at Newark on the 12th, and at Sandy Hook on the 14th. Thunderstorms occurred in various portions of the State on the 1st, 6th, 7th, 8th, 21st, 23d, 27th, 28th, and 31st. Hail fell with the thunderstorm of the 23d at New Brunswick and Somerville. The aurora was observed at Bergen Point on the 9th and 27th; at Vineland on the 25th, and at Plainfield on the 26th.

COMPARATIVE DATA FOR AUGUST.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more prec.
1885.....	71.7	95	40	6.11	10.09	3.47	.....	.....	.....	.....
1886.....	69.5	96	42	2.81	5.36	1.10	.....	.....	.....	.....
1887.....	70.4	94	42	3.76	7.34	2.09	.....	.....	.....	.....
1888.....	72.5	98	41	6.13	10.53	2.55	.....	.....	.....	.....
1889.....	69.6	91	45	5.13	9.06	1.93	.....	.....	.....	.....
1890.....	71.5	99	40	4.90	7.51	2.89	.....	.....	.....	.....
1891.....	72.8	100	46	5.32	8.89	2.58	8	15	8	10
1892.....	73.4	99	46	3.63	5.65	0.72	12	13	6	11
1893.....	72.8	98	38	6.52	11.94	3.55	14	11	6	13
1894.....	70.9	97	44	2.58	9.28	0.15	13	12	6	9
1895.....	74.2	102	34	2.53	5.06	0.02	16	12	3	8
1896.....	73.6	105	39	1.83	3.27	0.50	17	10	4	7
1897.....	71.0	91	41	4.39	8.69	2.07	14	12	5	9
1898.....	74.8	98	42	5.36	9.28	2.70	12	12	7	10
1899.....	72.3	99	39	4.36	9.70	2.16	10	12	9	9
1900.....	76.3	104	41	2.68	4.56	0.70	15	11	5	10
1901.....	73.8	98	44	9.43	15.80	4.88	12	10	3	11
1902.....	70.1	93	40	3.91	10.67	1.31	15	13	3	9
1903.....	68.4	98	39	6.95	14.54	4.30	10	10	11	13
1904.....	70.8	92	37	6.62	13.01	2.65	15	10	6	9
1905.....	71.1	95	38	5.72	9.88	3.51	13	10	8	12
1906.....	74.6	97	42	5.95	17.91	2.21	10	11	10	13
1907.....	70.5	96	39	3.45	7.61	1.79	14	12	5	10
1908.....	70.6	103	36	5.05	9.23	2.43	11	10	10	10
1909.....	70.2	100	34	4.59	12.94	1.41	14	9	8	6
1910.....	70.4	92	36	3.78	8.46	1.76	9	10	12	10
1911.....	72.1	101	39	8.91	14.74	5.31	10	11	10	11
1912.....	70.0	95	35	3.42	7.62	1.19	12	13	6	10
1913.....	71.7	100	38	4.06	10.21	1.93	18	9	4	10
1914.....	73.3	98	42	3.15	6.53	1.04	13	11	6	9
1915.....	70.9	98	41	7.73	10.92	4.02	11	12	9	13
1916.....	73.2	100	40	1.34	4.15	0.27	20	7	4	6

Climatological data for August, 1916.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.							Precipitation, in inches.				No. of days.				Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation of in. or more.	Clear.	Pt. cloudy.	Cloudy.		Prevailing direction of wind.
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	25	72.4 ^b	+1.6	93 ^b	21	47	14	33	1.69	-3.27	0.97	0	3	28	0	3	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	24	69.6	+1.9	95	22	40	29	43	1.06	-3.69	0.43	0	5	26	3	2	sw.	George S. Briggs.
Culvers Lake.....	Sussex.....	848	15	71.2 ^a	+2.0	96	21†	40	29	....	1.21	-3.32	5.58	0	7	27	2	2	sw.	Brice E. Riker.
Dover.....	Morris.....	600	32	71.2 ^a	+2.0	96	21†	45	29	40	1.77	-3.23	0.85	0	9	10	15	6	.....	William C. Harris.
Layton.....	Sussex.....	480	16	71.4	+3.0	99	21†	43	15	42	2.35	-1.29	1.20	0	7	25	3	3	sw.	A. M. Depue.
Newton.....	Sussex.....	769	35	71.4 ^b	+1.6	94	21	46	29	34	1.16	-3.25	0.69	0	5	23	3	5	sw.	Irving G. Kern.
Phillipsburg.....	Warren.....	363	34	74.4	+2.7	99	22	49	14†	35	1.07	-3.63	0.53	0	7	24	5	2	s.	D. Wilson Smith.
Sussex.....	Sussex.....	442	26	71.4	+2.7	99	22	49	14†	35	1.07	-3.63	0.53	0	7	24	5	2	.....	George Dymock.
Means and extremes.....				71.7	+2.1	99	21†	40	29	43	1.47	-3.10	1.20	0	6	23	5	3	sw.	
<i>The Red Sandstone Plain.</i>																				
Bayonne.....	Hudson.....	50	26	74.2	+1.3	98	22	53	29	31	0.84	-4.27	0.26	0	9	22	4	5	s.	Erskine R. Eadie.
Bergen Point.....	Hudson.....	37	19	73.4	+1.7	96	22	50	29	33	1.11	-3.95	0.55	0	4	9	20	2	nw.	William H. Mitchell.
Boonton.....	Morris.....	400	26	71.6 ^a	.....	99	22	43	29	45	1.01	-4.38	0.36	0	9	25	0	6	sw.	J. W. Demmers.
Chatham.....	Morris.....	330	14	74.6	+1.1	98	6	49	14	40	0.71	-4.21	0.33	0	6	26	2	3	.....	Miss M. A. Butler.
Elizabeth.....	Union.....	45	37	74.6	+1.1	98	6	49	14	40	0.50	-4.04	0.15	0	4	20	9	2	sw.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	28	74.5 ^a	+2.7	98	21†	49	29	39	1.20	-3.21	0.63	0	4	.....	.....	.....	sw.	Hiram E. Deats.
Highwood.....	Bergen.....	90	27	70.8	-0.4	91	8	45	29	32	2.23	-2.84	0.78	0	8	13	12	6	se.	Charles J. Bates.
Jersey City.....	Hudson.....	10	17	76.4	+3.1	98	22	54	29	28	0.68	-3.97	0.50	0	5	15	11	5	sw.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	29	74.6	+2.2	95	22	52	29	30	1.84	-2.92	0.93	0	6	18	12	1	sw.	Samuel W. Cochran.
Little Falls.....	Passaic.....	180	13	73.0	.....	95	6†	48	29	40	1.24	-3.87	0.42	0	7	18	3	10	w.	Montclair Water Co.
Newark.....	Essex.....	159	74	74.0	+1.4	96	21	55	29	33	0.27	-4.97	0.15	0	4	17	6	8	nw.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	110	63	73.6	+1.2	96	21†	49	29	39	2.61	-2.48	1.25	0	6	24	4	3	se.	N. J. Experiment Station.
Palisades Park.....	Bergen.....	80	1	71.0	.....	95	22	46	29	39	1.07	.....	0.35	0	7	19	9	3	s.	George P. Kirsten.
Paterson.....	Passaic.....	80	45	74.7	+2.7	99	22	50	29	36	0.37	-4.76	0.15	0	4	4	21	6	.....	Marion T. Probert.
Plainfield.....	Union.....	100	30	73.0	+0.9	94	22†	48	29	35	1.28	-3.59	0.60	0	9	16	9	6	sw.	John Neagle.
Pompton Plains.....	Morris.....	195	14	72.6	+0.7	100	22	45	14	43	0.57	-4.51	0.24	0	6	.....	.....	.....	.....	M. S. Taylor.
Somerville.....	Somerset.....	60	34	72.6	+0.7	100	22	45	14	43	0.63	-4.08	0.24	0	5	21	7	3	nw.	A. A. Macdonald.
South Orange.....	Essex.....	200	46	72.4	+1.7	92	6†	49	29	33	0.41	-4.98	0.18	0	3	20	7	4	s.	Dr. W. J. Chandler.
New York, N. Y.....		365	46	73.6	+1.4	94	22	55	28	24	0.59	-3.94	0.32	0	7	12	13	6	s.	U. S. Weather Bureau.
Means and extremes.....				73.4	+1.6	100	22	43	29	45	1.03	-3.94	1.25	0	6	18	8	5	sw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumber. and Burlington.....	30	35	75.6	+0.5	100	22	51	14	36	1.23	-3.51	0.62	0	6	25	4	2	sw.	Henry A. Jorden.
Burlington.....	Burlington.....	12	30	74.8	+1.4	96	22	52	29	35	1.59	-4.02	0.61	0	5	28	0	3	nw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	24	74.8	+1.4	99	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	George L. Wilson.
Hammonton.....	Atlantic.....	103	15	74.8	+1.4	99	22	48	29	41	2.12	-2.65	0.90	0	5	24	0	7	sw.	Frederick H. Hoeffler.
Hightstown.....	Mercer.....	140	24	74.8	+1.4	99	22	48	29	41	2.12	-2.65	0.90	0	5	24	0	7	sw.	Leon Dunbar.
Imlaystown.....	Monmouth.....	185	28	73.4	+0.3	100	22	44	14†	44	1.54	-3.63	0.56	0	4	22	6	3	s.	H. E. Bullock.
Indian Mills.....	Burlington.....	76	27	73.4	+0.3	100	22	44	14†	44	1.54	-3.63	0.56	0	5	16	13	2	s.	James M. Armstrong.
Lakewood.....	Ocean.....	54	13	71.7	+1.0	95	23	43	29	39	4.15	-0.92	2.24	0	7	16	10	5	nw.	R. W. Holman.
Moorestown.....	Burlington.....	75	54	74.3 ^a	+1.8	94	22	52	14†	32	1.57	-3.17	0.67	0	4	22	7	2	nw.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	9	74.3	+1.8	94	22	52	14†	32	1.57	-3.17	0.67	0	5	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	18	74.0	+1.0	97	22	53	29	33	0.92	-3.77	0.63	0	3	23	6	2	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	45	74.0	+1.0	97	22	53	29	33	1.25	-4.12	0.92	0	6	14	8	9	s.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	23	73.8	+1.6	96	8	46	14	41	1.61	-4.17	0.76	0	5	20	9	2	se.	Frank R. Austin.
Vineland.....	Cumberland.....	87	48	74.0 ^a	+0.4	97	22	49	14	38	0.72	-4.25	0.38	0	4	.....	.....	.....	.....	E. V. C. Hendricks.
Woodbine.....	Cape May.....	43	25	74.0	+1.8	97	22	50	29	38	0.66	-3.64	0.19	0	6	23	7	1	s.	Baron de Hirsch Agr. Sch.
Philadelphia, Pa.....		117	46	76.4	+2.6	97	22	59	29	26	0.94	-3.67	0.39	0	7	12	16	3	sw.	U. S. Weather Bureau.
Means and extremes.....				74.4	+1.1	100	22	43	29	44	1.62	-3.34	2.24	0	5	21	6	4	s.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	27	71.0	-0.9	95	8	49	14	28	1.59	-3.55	0.70	0	5	18	6	7	se.	Wilbur H. Pancoast.
Atlantic City.....	Atlantic.....	16	43	73.2	+9.6	91	12	54	14	28	1.21	-3.09	0.67	0	7	13	10	8	sw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	32	73.9	+0.5	95	22	56	29	29	1.03	-3.23	0.35	0	7	14	14	3	s.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	9	71.5	.....	95	8	52	14	28	2.70	.....	1.17	0	8	21	6	4	s.	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	18	74.0	+1.3	92	8	60	14	21	1.16	-3.69	0.45	0	6	13	13	5	s.	U. S. Weather Bureau.
Means and extremes.....				72.7	+0.4	95	8†	49	14	29	1.54	-3.39	1.17	0	7	16	10	5	s.	
For the State.....				73.2	+1.4	100	22	40	29	45	1.34	-3.56	2.24	0	6	20	7	4	sw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

* Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Vineland is South Vineland.

Daily precipitation for August, 1916.

Stations.	Day of month.																															Total.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
<i>The Highlands and Kittatinny Valley.</i>																																
Belvidere.....							.97									.12																1.69
Charlotteburg.....							.24				.11												.43		.06		.22					1.06
Culvers Lake.....							.01	.02	T.	T.	.08												.01		.01	.58	.50					1.21
Dover.....							*	.26	.06	.05		.03				.03							.85		.22		.27					1.77
Dayton.....							T.	.02	.08		.05												.50			.22	1.20	.28				2.35
Newton.....							.15	T.			.06					.07											.19	.69				1.16
Phillipsburg.....	.09						T.	.21				.18				.01	.04							T.			.01	.53				1.07
Sussex.....																																
<i>The Red Sandstone Plain.</i>																																
Bayonne.....					.07	.24	.26	.02		.01	.03	.06											T.				.05	.10				0.84
Bergen Point.....						.20	.55			T.	T.												T.			.25	.11					1.11
Boonton.....	.02					.15	T.	.14			.01	.04												.36		.16	.01	.12				1.01
Chatham II.....								.10				.18					.04						.06					.05	.28			0.71
Elizabeth.....				T.		T.	.15			T.	.08												.12					.15				0.50
Flemington.....	T.							.06				.34				.61	.02															1.20
Highwood.....					.63	.29	.24	.16	.72	.06	.01	T.																.17				2.23
Jersey City**.....					T.			.50	.03	.02		.06											T.	T.			.12					0.68
Lambertville.....	.02				T.			.10				.93				.25											.09	.45				1.84
Little Falls**.....						.42	.12	.03	T.	.04																	.40					1.24
Newark**.....							T.	.15		T.	.01	.08											T.	T.					.03			0.27
New Brunswick.....	.01				T.			T.				.25											T.	1.25	.07		.69	.34				2.61
Palisades Park.....					T.	.35	.11	.21	.01	.07		.08				T.							T.				.24					1.07
Paterson.....					T.	.15	.06																					.13				0.37
Plainfield**.....	T.					.06	.60				.08	.06				.07							.05	.13				.01	.22			1.28
Pompton Plains II.....								.04		.11	.02														.24			T.	.02	.14		0.57
Pomerville.....							T.				.24					.11	.01							.13			T.	.14				0.63
South Orange.....					T.			.17		T.	T.	.06											T.					T.	.18			0.41
New York, N. Y.***.....					T.	T.	.01	.32	.13	T.	.01	.05				T.							T.	T.				T.	.04	.03		0.59
<i>The Southern Interior.</i>																																
Bridgeton.....	.05							.30			.18		T.	.08														.42	.20			1.23
Burlington.....								.27			.61													.15	.27		.29					1.59
Dayton.....								.16				.05													T.							§
Dammonton.....																																
Hightstown.....								.34				.90																	.24			2.12
Maylown.....								.85																								2.65
Indian Mills.....					.05			.56				.34				.25								T.	.15		.30					1.54
Lakewood.....						.40			T.	T.		.68			.07									2.24	.11		.33	.32				4.15
Moorestown.....							.67					.38				T.										.09		.43				1.57
Northfield.....	.01											.23				.21											.05		.57			1.07
Pleasantville.....	T.								T.			.06	T.			.23																0.92
Trenton***.....	.03		T.				.15				.13	.79				T.								.08			T.	T.	.07			1.25
uckerton.....	.03						.67				.36					.29												.26				1.61
Wineland.....	.01						.23					T.				.10												.38				0.72
Woodbine.....	T.						.10				.19					.12	.02									.06			.17			0.66
Philadelphia, Pa.***.....	.02						.36				.11	.28	T.			.07	T.								.03				.07			0.94
<i>The Sea Coast.</i>																																
Asbury Park**.....	T.					T.		.19	.01	T.																		.62	.07			1.59
Atlantic City***.....	T.							.01				.27	T.			.23	.01								.01	.01			.67		T.	1.21
Cape May City***.....								.06	T.			T.		.12		.22									.04	.06		.18	.35			1.03
Long Branch**.....						T.	.19	.03	.01	.22	.98					T.									.10			.53	.64			2.70
Sandy Hook***.....							.42			.01	.09					T.												.39	.06			1.16

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded.
|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.
* Precipitation included in the next following measurement. **Precipitation for 24-hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

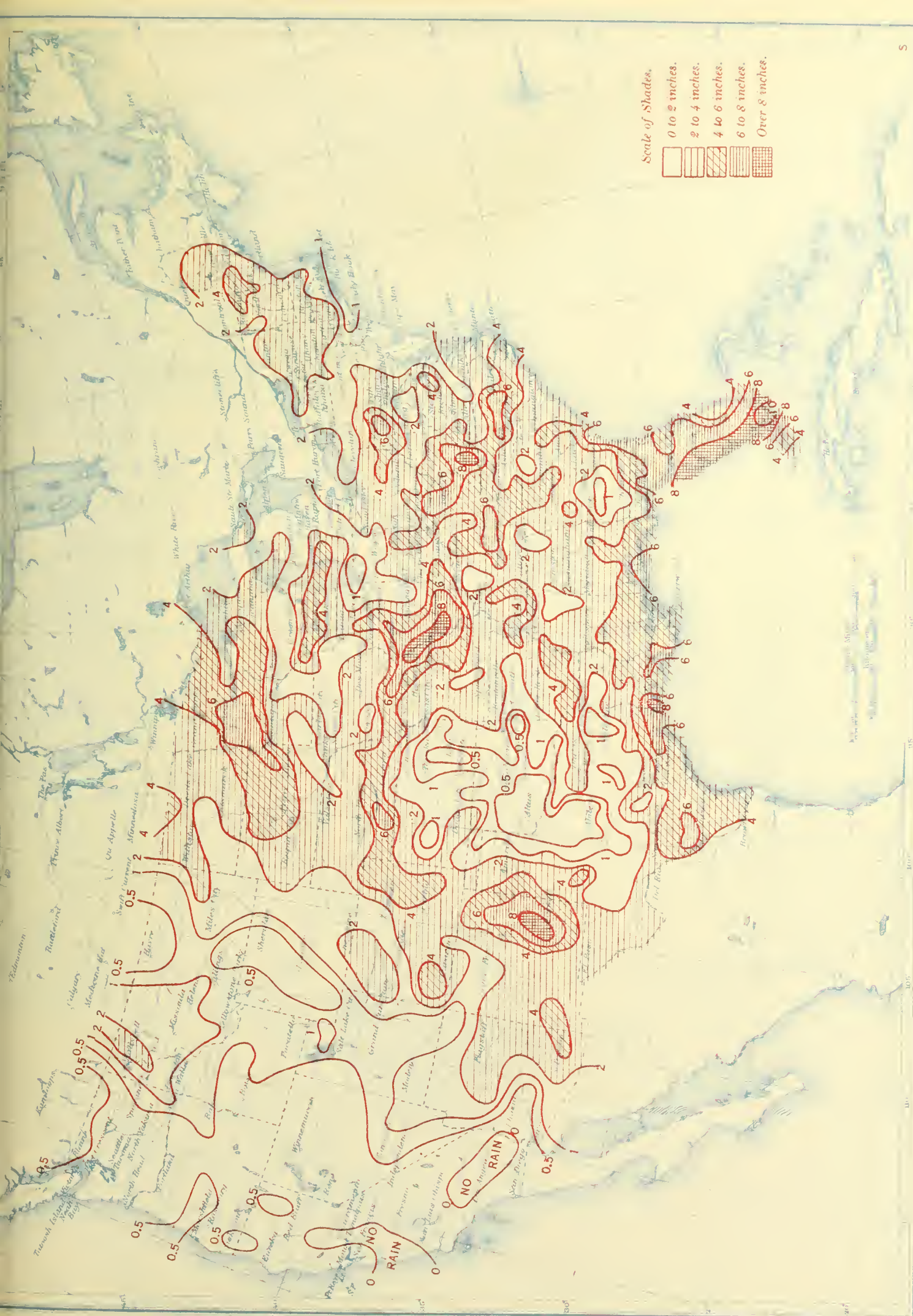
Stations.	Pressure.					Wind.				Moisture.		Sun- shine
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	
							Miles per hour.	Direction.	Date.			
Atlantic City.....	30.01	30.28	29	29.68	23	7	18	n.	28	79	77	79
Asbury Park.....												
Cape May City.....	30.03	30.24	29	29.75	8	7	22	nw.	22			
Long Branch.....												
Newark.....												
New York, N. Y.....	29.99	30.29	29	29.60	8	12	30	nw.	8	62	75	66
Palisade Park.....	29.99	30.30	29	29.59	8		45	nw.	8	76	70	71
Philadelphia, Pa.....	30.01	30.29	29	29.67	23	8	30	n.	28	76	74	74
Sandy Hook.....	29.99	30.28	29	29.60	8	12	47	n.	28	82	67	69
Trenton.....	29.99	30.29	29	29.57	8	9	37	nw.	23	83	70	68

§ Two directions and dates

* 7 a. m. † 9 p. m.

Daily temperature for August, 1916.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.		
<i>The Highlands and Kittatinny Valley.</i>																																		
Belvidere.....	Maximum...	86	86	85	85	87	90	91	...	82	74	75	81	72	78	82	86	87	88	88	88	93	...	91	87	85	88	87	78	75	78	84	84.0 ^b	
	Minimum...	66	56	54	64	68	72	73	...	71	62	60	58	52	47	53	57	63	62	60	60	60	67	68	68	...	64	64	56	49	51	56	60.7 ^b	
Charlotteburg.....	Maximum...	89	77	79	84	85	92	88	91	81	75	68	81	77	76	83	80	86	84	86	86	93	95	86	86	82	84	85	79	75	78	79	82.9	
	Minimum...	67	49	45	60	69	67	67	73	69	59	59	63	56	46	43	48	57	52	52	51	50	69	60	60	43	59	60	54	40	42	54	56.2	
Dover.....	Maximum...	84	83	...	81	85	93	89	91	83	68	67	86	71	79	84	80	88	85	86	86	96	96	94	76	85	85	85	68	76	81	85	83.2 ^a	
	Minimum...	62	54	...	66	71	71	70	73	68	61	61	61	54	48	49	53	60	57	56	55	56	70	66	57	51	63	64	49	45	47	55	59.1 ^a	
Layton.....	Maximum...	84	81	80	83	87	96	91	94	83	73	71	86	73	80	84	85	90	90	92	92	99	99	94	78	86	87	86	72	76	80	84	85.0	
	Minimum...	62	50	49	51	68	69	67	75	70	62	61	64	53	45	43	52	62	55	57	58	57	64	64	61	50	61	63	55	45	48	51	57.8	
Newton.....	Maximum...	81	80	78	89	85	90	89	90	81	77	78	83	72	76	81	81	83	85	87	87	94	93	92	75	86	86	84	77	73	77	81	82.9	
	Minimum...	64	51	...	...	69	70	73	70	60	59	64	55	50	53	53	62	59	60	60	60	62	...	60	54	62	64	55	46	52	57	59.8 ^c		
Phillipsburg.....	Maximum...	89	83	83	87	89	95	93	94	82	77	73	88	84	81	85	84	91	90	90	92	97	99	96	80	88	91	88	80	78	82	88	87.0	
	Minimum...	66	57	54	66	70	70	73	74	72	63	62	66	59	49	53	58	64	61	61	60	62	69	69	61	55	66	64	57	49	51	55	61.8	
Sussex.....	Maximum...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Minimum...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
<i>The Red Sandstone Plain.</i>																																		
Bayonne.....	Maximum...	86	78	81	83	86	90	94	94	88	69	67	86	81	80	79	88	84	85	85	85	92	98	90	80	89	86	87	71	77	82	86	84.1	
	Minimum...	70	62	60	72	67	75	76	72	67	62	63	60	58	54	64	64	64	64	64	62	61	72	69	67	61	67	68	57	53	56	61	64.3	
Bergen Point.....	Maximum...	83	83	82	84	84	94	91	94	86	71	70	86	72	78	83	83	80	84	83	83	92	96	93	...	88	86	88	72	76	82	86	84.1 ^a	
	Minimum...	67	62	58	66	69	70	74	79	70	62	61	66	60	51	57	62	63	60	57	62	60	59	69	69	61	58	65	68	56	50	54	59	62.7
Boonton§§.....	Maximum...	88	81	80	79	86	91	88	91	83	67	78	81	75	81	82	83	80	90	90	89	89	99	94	78	86	86	87	71	80	82	85	84.5	
	Minimum...	66	54	51	64	69	72	70	75	72	60	61	63	55	53	48	53	56	56	...	54	53	...	48	...	...	...	...	...	...	...	...	58.0 ^b	
Elizabeth.....	Maximum...	89	85	86	88	88	98	94	96	89	83	72	91	78	82	86	84	92	89	89	87	96	96	95	82	93	88	88	70	77	85	85	87.1	
	Minimum...	67	58	55	62	70	72	74	75	73	64	62	66	59	49	53	59	58	60	59	61	56	77	62	63	55	65	68	60	60	51	56	62.2	
Flemington.....	Maximum...	87	82	83	87	87	94	92	94	84	78	71	88	77	83	83	72	78	86	88	88	98	98	96	82	87	88	90	75	78	...	...	86.0 ^a	
	Minimum...	68	59	55	65	71	73	75	76	74	64	62	66	61	51	54	59	62	62	59	59	59	70	69	65	60	64	65	57	49	...	...	56.0 ^a	
Highwood.....	Maximum...	82	78	80	83	84	88	88	91	84	73	68	84	72	79	80	79	83	80	81	80	88	89	90	75	85	84	85	73	73	79	83	81.3	
	Minimum...	65	56	55	66	64	72	72	73	70	62	61	65	57	48	51	58	59	59	58	57	56	67	66	62	53	64	62	55	45	51	56	60.2	
Jersey City.....	Maximum...	87	82	84	87	85	95	93	97	91	85	72	91	85	82	86	84	92	90	87	88	98	98	96	82	87	88	90	72	76	83	89	86.3	
	Minimum...	70	64	63	71	72	74	75	77	74	64	63	67	63	56	61	67	64	64	60	67	67	76	73	67	62	69	69	59	54	59	64	66.5	
Lambertville.....	Maximum...	84	84	83	84	85	93	92	93	84	81	75	84	83	78	81	78	84	86	86	85	93	95	94	87	85	87	86	78	76	79	84	84.6	
	Minimum...	71	63	59	68	72	74	76	76	75	65	63	66	64	54	58	62	65	63	64	61	63	71	72	65	59	67	68	58	52	55	58	64.7	
Little Falls.....	Maximum...	85	83	83	87	88	95	93	95	86	73	74	86	73	78	83	83	88	87	87	87	95	95	94	79	86	86	87	72	76	80	82	84.9	
	Minimum...	60	58	54	66	73	72	72	73	71	62	62	63	55	54	63	63	60	61	59	58	55	69	67	58	53	64	66	51	48	52	56	61.2	
Newark.....	Maximum...	85	79	81	83	84	92	93	94	85	68	69	86	72	80	82	79	87	83	87	86	96	95	92	77	86	83	88	73	77	82	86	83.5	
	Minimum...	70	62	62	68	70	71	71	76	68	62	62	65	60	56	60	63	64	64	64	64	63	75	68	65	60	66	68	56	55	58	61	64.5	
New Brunswick.....	Maximum...	88	80	82	85	85	93	91	93	83	81	70	87	84	75	83	78	88	87	86	86	96	96	95	82	78	86	86	72	74	80	86	84.7	
	Minimum...	69	61	56	68	70	70	71	75	74	63	61	65	61	59	56	61	59	61	6	58	57	73	65	64	57	64	66	57	49	53	58	62.4	
Palisades Park.....	Maximum...	83	80	78	84	84	92	90	92	86	66	70	86	72	80	82	80	86	81	85	83	94	95	92	77	86	87	67	75	83	85	82.8		
	Minimum...	58	57	56	66	66	72	73	70	66	62	60	58	51	48	50	60	59	58	56	55	68	67	56	53	65	67	67	49	46	52	55	59.3	
Paterson.....	Maximum...	90	82	83	85	87	93	94	95	87	81	71	89	82	82	86	82	90	87	88	95	99	97	79	90	88	90	71	79	84	88	86.5		
	Minimum...	68	59	57	66	71	73	73	70	73	62	63	66	55	53	56	59	62	62	62	62	62	69	69	66	66	63	57	50	55	58	62.9		
Plainfield.....	Maximum...	83	82	83	83	85	92	90	93	84	76	71	87	75	78	82	80	87	84	83	86	93	94	94	76	86	85	87	71	75	79	85	83.5	
	Minimum...	68	60	56	68	71	72	74	75	73	63	62	65	58	50	55	60	60	62	61	59	58	73	69	65	55	64	68	58	48	52	58	62.6	
Somerville.....	Maximum...	89	84	8	85	85	94	91	94	85	71	73	88	84	79	83	80	89	87	87	88	98	100</											



Scale of Shades.

- 0 to 2 inches.
- 2 to 4 inches.
- 4 to 6 inches.
- 6 to 8 inches.
- Over 8 inches.

UNIVERSITY OF ILLINOIS
URBANA

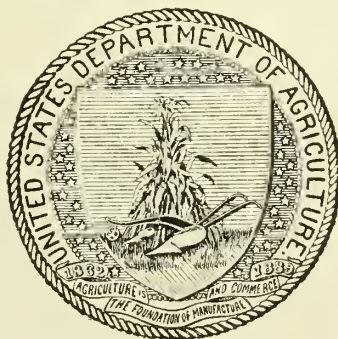
U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU
CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

SEPTEMBER, 1916.

BY
G. HAROLD NOYES
METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
OCTOBER 17, 1916.

Departure of the Mean Temperature from the Normal, September, 1916.



Shaded portions show excess (+).
Unshaded portions show deficiency (-).
Lines show amount of excess or deficiency.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

VOL. XXIX. TRENTON, N. J., SEPTEMBER, 1916. No. 9.

GENERAL SUMMARY.

The normal September weather along the middle Atlantic coast is probably the most agreeable for out-of-door occupations of any season of the year. Daytime temperatures are not frequently unpleasantly high and the cool nights do not materially lower soil temperatures. Rains are a little less frequent and of smaller amount, so that consecutively dry weather is more apt to occur. In New Jersey, in September, 1916, the weather did not depart markedly from what is ordinarily to be expected. It was slightly cooler and drier than usual, with very little cloudiness. Considerably more rain fell than in September a year ago, and this was noted more particularly in central and southern portions. Low temperatures projected southward into the "Pines" and cranberry bogs, and it was cooler in portions of the interior of Ocean and Burlington counties than in regions of much greater elevation more to the northward. The warmest period of the month attended the low pressure which prevailed on the 8th, and the coolest period was from the 24th to the 26th and on the 30th. The principal rainy days were the 6th, 7th, 8th, 15th, the 18th-19th, and 29th, with general occurrences on the 23d in northern counties, and on the 25th in central portions. Cape May City received more rain than normal, but elsewhere deficiencies were reported. As frequently happens in summer showers, there were no great variations in rainfall within comparatively narrow limits.

The crop growing season has been a dry one, and except perhaps for wheat and hay, production has not equalled that of last year. Owing to the dryness, crops matured early enough, so that there was little danger of damage from frost. Fall plowing and seeding has been retarded because of dry soil, but these and other farming operations were being carried forward toward completion at the close of the month.

The mean stage of the Delaware river at Phillipsburg was 1.1 feet, the highest being 3.1 feet on the 17th. At Trenton the mean stage was 0.6 foot below normal. The highest stage was 2.2 feet on the 18th.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 37 stations, was 65.2°, which was 0.6° below normal. The highest mean temperature was at Bridgeton and the lowest at Charlotteburg. The highest temperature of the month was 98° at Elizabeth on the 8th, and the lowest, 31° at Charlotteburg on the 20th. The greatest daily range of temperature was 44° at Indian Mills on the 20th and 26th. Every station reported an extreme highest temperature of 88° or higher on the 8th.

PRECIPITATION.

The average rainfall for the State, as deduced from observations of 42 stations, was 2.84 inches, which was 1.11 inches below normal. The greatest amount was 5.29 inches at Cape May City, and the least, 1.29 inches at Sandy Hook. The greatest

amount falling in 24 consecutive hours was 3.05 inches at Culvers Lake on the 15th. The distribution of the rain was relatively uniform, and the number of days on which 0.01 inch or more fell was 7, which was 1 less than normal.

WIND.

The prevailing wind direction was from the southwest, with an approximate velocity of 11 miles per hour, which was slightly above normal. The highest velocity, sustained for five consecutive minutes, was 56 miles per hour from the northwest, on the 8th, at Sandy Hook.

SUNSHINE AND CLOUDINESS.

The average number of clear days for the month was 20, which was 6 above normal; partly cloudy, 7, which was 2 below normal; cloudy 3, which was 4 below normal.

Sunshine averaged about 72 per cent. of the possible amount, and this was somewhat in excess of the usual amount.

MISCELLANEOUS.

The pressure of the atmosphere, reduced to sea level, averaged 30.07 inches, which was normal. Highest readings occurred on the 11th, and lowest, on the 8th and 29th. Dense fog was observed in various portions of the State on the 1st, 6th, 7th, 8th, 13th, 14th, 15th, 19th, 21st, 22d, and 28th. Hail fell at Asbury Park on the 8th, and at several points in northern districts on the 23d. Solar halos were observed on the 1st, and 9th. Light frost was reported in the extreme northern highlands on the 3d; it was quite general on the 20th and 26th, and in some of the cranberry bogs the temperature was 26° on the 26th, with ice. Thunderstorms occurred in various portions of the State on the 7th, 8th, 15th, 18th, 23d, 25th, and 29th. The aurora was observed on the 2d, 4th, and 30th; the last being "brilliant, with large beams of light shooting upward from an arch, lasting about an hour and a half. Palisades Park."

COMPARATIVE DATA FOR SEPTEMBER.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more prec.
1885.....	64.2	93	38	0.83	1.69	0.25	.....	.....	.....	.....
1886.....	66.9	95	36	1.13	1.76	0.86	.....	.....	.....	.....
1887.....	67.6	90	30	3.66	6.25	1.62	.....	.....	.....	.....
1888.....	63.1	84	29	7.09	10.65	3.75	.....	.....	.....	.....
1889.....	64.8	90	34	8.36	13.13	3.17	.....	.....	.....	.....
1890.....	64.4	91	33	4.75	8.61	2.59	10	10	10	10
1891.....	68.7	95	39	2.46	5.91	0.90	16	9	5	6
1892.....	64.2	90	33	1.81	3.78	1.02	15	11	4	6
1893.....	62.7	90	31	3.20	5.38	1.93	12	10	8	8
1894.....	68.8	97	31	7.46	11.65	3.69	10	10	10	8
1895.....	69.7	109	29	1.07	2.71	0.22	17	10	3	5
1896.....	65.1	95	30	4.37	8.74	2.26	19	7	4	5
1897.....	65.5	99	30	1.65	3.97	0.21	19	7	4	5
1898.....	68.6	100	31	2.00	3.87	0.65	17	8	5	6
1899.....	64.4	93	30	5.88	9.61	2.88	15	9	6	9
1900.....	69.9	98	32	2.86	7.37	1.09	14	10	6	6
1901.....	66.8	94	29	3.38	6.82	1.63	15	9	6	10
1902.....	64.6	93	30	5.65	8.95	3.11	11	7	12	13
1903.....	65.0	92	29	3.34	7.10	1.39	17	8	5	7
1904.....	64.8	93	23	4.79	10.08	0.89	14	10	6	7
1905.....	65.4	90	28	5.23	9.18	2.87	16	7	7	8
1906.....	68.9	94	33	2.19	4.66	0.75	15	9	6	7
1907.....	67.1	92	31	8.08	12.95	3.55	10	8	12	14
1908.....	65.7	90	29	2.09	4.13	0.95	11	10	9	3
1909.....	64.5	89	30	3.30	4.58	2.08	11	10	9	8
1910.....	67.3	97	32	2.39	3.97	1.01	12	10	8	6
1911.....	66.4	90	30	2.88	5.33	1.08	10	12	8	9
1912.....	65.9	87	28	4.47	6.76	2.68	12	7	11	10
1913.....	64.4	96	27	3.87	6.55	1.56	13	8	9	9
1914.....	64.0	99	24	0.37	1.64	0.14	21	6	3	3
1915.....	68.5	97	30	2.08	4.46	0.55	17	9	4	5
1916.....	65.2	98	31	2.84	5.29	1.29	20	7	3	7

Climatological data for September, 1916.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation, in, or more.	Clear.	Pt. cloudy.			Cloudy.
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	25	64.4 ^a	-0.7	91	8	38	26	42	3.63	-0.29	2.12	0	4	27	0	3	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	24	60.8	-1.5	88	8	31	20	41	3.77	-0.91	1.67	0	4	27	2	1	w.	George S. Briggs.
Culvers Lake†.....	Sussex.....	848	15	63.0 ^b	-0.6	90	8	34	19	.....	3.67	-0.14	3.05	0	7	28	0	2	e.	Brice E. Riker.
Dover.....	Morris.....	600	32	62.0 ^c	-0.6	90	8	38	30	40 ^d	2.69	-1.79	1.38	0	6	8	17	5	.....	William C. Harris.
Layton.....	Sussex.....	480	16	63.0 ^b	+1.2	90	8	34	26	43	3.41	-0.46	2.32	0	9	23	4	3	sw.	A. M. Depue.
Newton.....	Sussex.....	769	35	62.6	-1.0	90	8	40	17 ^f	37	2.58	-1.10	2.15	0	7	16	5	9	s.	Irving G. Kern.
Phillipsburg.....	Warren.....	363	34	65.4	0.0	93	8	39	20	37	3.70	-0.08	2.08	0	8	23	5	2	s.	D. Wilson Smith.
Sussex.....	Sussex.....	442	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	George Dymock.
Means and extremes.....				63.0	-0.4	93	8	31	20	43	3.35	-0.68	3.05	0	6	22	5	3	s.	
<i>The Red Sandstone Plain.</i>																				
Bayonne.....	Hudson.....	50	26	.....	.....	93	8	.....	.....	.....	.....	.....	0.99	0	.....	.....	.....	.....	.....	Erskine R. Eadie.
Bergen Point†.....	Hudson.....	37	19	64.8	-1.9	93	8	42	20 ^f	34	.....	.....	.....	0	7	17	12	1	nw.	William H. Mitchell.
Boonton.....	Morris.....	400	26	.....	.....	93	8	34	26	40	2.86	-1.63	1.81	0	7	22	7	1	sw.	J. W. Demmers.
Chatham.....	Morris.....	330	14	.....	.....	.....	.....	.....	.....	.....	3.23	-0.90	2.05	0	7	25	3	2	.....	Miss M. A. Butler.
Elizabeth.....	Union.....	45	37	67.2	+0.2	98	8	39	20 ^f	40	3.59	-0.47	1.51	0	7	17	11	2	sw.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	28	65.8	+0.7	94	8	39	26	39	3.38	-0.60	1.90	0	7	24	4	2	w.	Hiram E. Deats.
Highwood.....	Bergen.....	90	27	62.6	-1.6	90	8	38	26	35	3.29	-0.87	1.35	0	8	13	15	2	sw.	Charles J. Bates.
Jersey City.....	Hudson.....	10	17	67.8	+0.6	95	8	47	20 ^f	30	3.38	-0.33	1.16	0	9	17	11	2	s.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	29	66.1	+0.1	91	8	44	20 ^f	29	2.77	-1.41	1.92	0	3	17	11	2	sw.	Samuel W. Cochran.
Little Falls.....	Passaic.....	180	113	64.3	.....	93	8	40	26 ^f	36	3.62	-0.98	2.20	0	6	17	5	8	w.	Montclair Water Co.
Newark.....	Essex.....	159	74	65.6	-0.3	92	8	41	30	29	3.66	-0.19	1.79	0	7	17	7	6	sw.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	110	63	65.6	-0.4	93	8	41	20 ^f	34	2.53	-1.32	1.23	0	9	22	6	2	sw.	N. J. Experiment Station.
Palisades Park.....	Bergen.....	80	1	63.6	.....	94	8	36	30	37	3.06	.....	1.09	0	8	19	8	3	nw.	George P. Kirsten.
Paterson.....	Passaic.....	80	45	67.1	+0.9	95	8	42	20	35	2.99	-1.45	1.73	0	8	.....	.....	.....	sw.	Marion T. Probert.
Plainfield.....	Union.....	100	30	64.9	-0.3	92	8	38	26	35	2.95	-1.50	1.79	0	8	14	12	4	sw.	John Neagle.
Pompton Plains.....	Morris.....	195	14	.....	.....	.....	.....	.....	.....	.....	3.30	-1.25	1.87	0	8	.....	.....	.....	.....	M. S. Taylor
Somerville.....	Somerset.....	60	34	64.2	-1.1	94	8	34	26	42	4.23	+0.57	2.79	0	8	23	4	3	sw.	A. A. Macdonald.
South Orange.....	Essex.....	200	46	64.3	+0.2	89	8	43	26	31	3.27	-0.82	1.20	0	8	23	5	2	s.	Dr. W. J. Chandler.
New York, N. Y.....		365	46	66.0	-0.5	89	8	44	30	24	2.98	-0.61	1.04	0	9	13	14	3	s.	U. S. Weather Bureau.
Means and extremes.....				65.3	-0.2	98	8	34	26	42	3.26	-0.88	2.79	0	7	19	8	3	sw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	35	67.4	-0.8	95	8	40	20 ^f	38	1.83	-1.98	0.52	0	6	25	1	4	sw.	Henry A. Jorden.
Burlington.....	Burlington.....	12	330	67.2	+0.2	94	8	42	20 ^f	36	2.44	-1.48	0.66	0	7	25	2	3	nw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	24	66.2	-0.5	95	8	35	26	43	1.33	-2.69	0.64	0	7	22	7	1	sw.	George L. Wilson.
Hammonton.....	Atlantic.....	103	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Frederick H. Hoeffer.
Hightstown.....	Mercer.....	140	24	65.9	-0.7	95	8	39	20 ^f	36	2.08	-1.80	0.77	0	7	26	2	2	sw.	Leon Dunbar.
Imlaystown.....	Monmouth.....	185	28	64.2 ^a	-2.5	.....	.....	35	26	43	1.85	-2.46	0.60	0	6	24	4	2	s.	H. E. Bullock.
Indian Mills.....	Burlington.....	76	27	65.4	-0.7	95	8	34	20 ^f	44	1.96	-2.21	0.55	0	8	16	10	4	s.	James M. Armstrong.
Lakewood.....	Ocean.....	54	13	63.4	-2.0	89	5 [†]	35	20	35	1.79	-2.09	0.56	0	5	18	8	4	nw.	R. W. Holman.
Moorestown.....	Burlington.....	75	54	66.6	+0.6	92	8	42	20	35	1.81	-1.95	0.79	0	6	22	8	0	sw.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	9	.....	.....	.....	.....	.....	.....	.....	2.71	.....	0.86	0	10	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	18	.....	.....	.....	.....	.....	.....	.....	2.46	-0.95	1.03	0	7	23	5	2	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	45	66.1	-0.8	92	8	41	30	29	2.51	-1.08	0.73	0	7	12	14	4	s.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	23	65.8 ^a	-0.2	95	8	35	26	43	1.30	-2.06	0.36	0	8	19	10	1	se.	Frank R. Austin.
Vineland†.....	Cumberland.....	87	48	66.0	-0.9	92	8	38	20 ^f	38	2.44	-1.40	0.58	0	9	13	3	14	se.	E. V. C. Hendrickes.
Woodbine.....	Cape May.....	43	25	65.6	-0.7	90	8	38	20 ^f	35	3.47	-0.56	1.14	0	8	21	7	2	s.	Baron de Hirsch Agr. Sch.
Philadelphia, Pa.....		117	46	68.5	+1.1	92	8	45	30	25	2.44	-0.94	1.44	0	7	16	10	4	sw.	U. S. Weather Bureau.
Means and extremes.....				65.8	-0.8	95	8	34	20 ^f	44	2.14	-1.75	1.14	0	7	21	6	3	s.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	27	64.6	-2.3	92	8	45	26	29	2.55	-0.69	1.30	0	8	19	9	2	s.	Wilbur H. Pancoast.
Atlantic City.....	Atlantic.....	16	43	66.4	-1.2	89	8	45	30	25	1.47	-1.58	0.47	0	9	15	10	5	sw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	32	66.5	-2.5	90	8	44	30	22	5.29	+2.29	1.67	0	8	16	10	4	s.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	9	64.3	.....	92	8	43	20 ^f	30	3.34	.....	1.38	0	8	18	8	4	s.	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	18	67.0	-0.4	90	8	49	30	22	1.29	-2.75	0.40	0	7	15	12	3	s.	U. S. Weather Bureau.
Means and extremes.....				65.8	-1.6	92	8	43	20 ^f	30	2.79	-0.68	1.67	0	8	17	10	3	s.	
For the State.....				65.2	-0.6	98	8	31	20	44	2.84	-1.11	3.05	0	7	20	7	3	sw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

* Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Vineland is South Vineland.

Daily precipitation for September, 1916.

Stations.	Day of month.																															Total.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
The Highlands and Kittatinny Valley.																																	
Belvidere.....								.70							2.12								.09						.72			3.62	
Charlotteburg.....							T.	.79							1.67								.11						1.20			3.77	
Culvers Lake.....						.12	T.	.12							3.05				.02			.01							.04	.31		3.67	
Dover.....						.06		.15							1.38			.12				.24							.74			2.69	
Wayton.....		.04				.05		.07							2.32			.05			.05		.12						.57	.14		3.41	
Clewton.....							T.	.01							2.15	T.		.06	.06				.06						.20	.04		2.58	
Phillipsburg.....		.01						.68							2.08				.03				.23	.01					.51	.15		3.70	
Sussex.....																																	
The Red Sandstone Plain.																																	
Wayonne.....		.01					.05	.05	.28						.99															.48			
Wergen Point.....		T.					.09	.02	T.								.03	.75				.12		T.					.58				
Wontou.....							.11		.26						.13	1.68		.10				T.	.13							.45			
Watham II.....							.15		.12						.20	1.85		.48				.07								.36			
Elizabeth.....	T.	T.					.09	.15	.12						1.51		.93					.09								.70			
Wilmington.....							.02	.03							1.90		.23	.18				.02								1.00			
Wighwood.....		T.					.01	.40	.18						1.33	.02	T.	.26				.06		T.					1.03	T.			
Wersey City.....		.03					.14	.10	.16						1.16		.80	.06				.06			T.					.87			
Wambertville.....		T.					.07								1.92															.78			
Wittle Falls**.....		T.					T.	.16	.18						2.20		.15	T.				.13								.80			
Wewark**.....		T.					.01	.22	.14						1.79		1.10					.02		T.						.38			
Wew Brunswick.....		T.				T.	.10	.09	.08						1.23	.02		.39				.01								.58	.03		
Walisades Park.....					T.		.01	.21	.30						1.09		.47					.15		T.						*	.83		
Waterson.....							.10	.20	.11						1.73		.14					.16		T.						.05	.50		
Wainfield**.....		.03				T.	.08	.06	.03						1.79		.50					.04								.42			
Wompton Plains III.....							.03		.29						.06	1.81		.17				.04	.29							.61			
Womerville.....		.01					.15	.07							2.79		T.	.57				.06								.43	.11		
Wouth Orange.....		T.					.01	.57	.03						1.20		.61	.14				.04								.67			
Wew York, N. Y.***.....		.01					.19	.05	.17						1.04		.58	.06				.07		T.						.81			
The Southern Interior.																																	
Wridgeton.....		T.				.20	.22	.37							.32			.20												.52			
Wurlington.....		T.				.03	.43	.32							.67			.36												.54	.10		
Wlayton.....		T.				.07	.17	.01							.32			.09												.64	.03		
Wammonton.....							.02	.09	.18						.70			.29					T.							.77	.03		
Wightstown.....																																	
Wnlaystown.....						.15	.10	.40							.20			.40												.60			
Wndian Mills.....		T.				.10	.33	.25							.51			.12					.04	.06						.55			
Wlakewood.....							.30	.44							.43			.06												.56			
Wcoolestown.....						T.	.05	.48							.36			.13												.68	.11		
Worthfield.....						.48	.13	.04	.15						.81	.01		.04						.11						.86	.08		
Wleasantville.....						.47	.04	T.	.08						.70			T.						.14						.95	.08		
Wrenton***.....		T.				.03	.65	.44						T.	.73		.24	.01					T.							.41			
Wuckerton.....						.09	.22	T.	.15						.36			.11						.09						.20	.08		
Wineland.....						.26	.20	.30	.33						.42			.21				.01		T.	.07					.58			
Woodbine.....		T.				.73	.18		.38						.90	.06		.08												1.06	.08		
WPhiladelphia, Pa.***.....		.01					T.		1.44					.01	.40			.12	.01				T.	T.	T.					.45			
The Sea Coast.																																	
Wsbury Park**.....						.01	.12	.77	.01						.28			.03	.03				T.							1.30			
Wlantic City***.....		.01				.45	.02	T.	.16						.35			.02						.04	.11					.31			
Wape May City***.....						1.67	.05	.38	.26					T.	1.40			.09					.01							1.43			
Wong Branch**.....		T.				.01	.25	1.24	.03						.36			.04	.03											1.38			
Wandy Hook***.....						T.	.11	.06	.01						.40			.34	.03				T.							.34			

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded.

‡ Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.

* Precipitation included in the next following measurement. **Precipitation for 24-hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.			Moisture.		Sun- shine	
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.		Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	Percentage of possible sunshine	
							Miles per hour.	Direction.				
Atlantic City.....	30.09	30.48	11	29.76	7	s	24	s.	29	77	73	80
Asbury Park.....	30.11	30.45	11	29.86	7	s	30	nw.	29	77	73	80
Ape May City.....	30.04	30.48	11	29.70	7	s	14	48 nw.	29	77	73	80
Long Branch.....	30.05	30.37	11	29.73	7	s	6	36 n.	30	76	74	80
Newark.....	30.06	30.49	11	29.69	7	s	16	60 nw.	29	74	70	80
New York, N. Y.....	30.07	30.50	11	29.72	7	s	10	36 nw.	29	75	64	74
Wallisade Park.....	30.10	30.48	11	29.76	29	s	16	56 nw.	29	77	72	73
Philadelphia, Pa.....	30.06	30.51	11	29.71	29	s	10	39 s.	29	79	69	69
Andy Hook.....	30.06	30.48	11	29.69	7	s	10	39 s.	29	79	69	69
Wrenton.....	30.06	30.48	11	29.69	7	s	10	39 s.	29	79	69	69

‡ Two directions and dates

* 7 a. m. † 9 p. m.

Daily precipitation for September, 1916.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
<i>The Highlands and Kittatinny Valley.</i>																																	
Belvidere.....	Maximum...	84	79	76	89	82	86	86	91	78	78	78	79	79	87	76	75	69	74	67	69	74	76	77	65	65	75	80	82	80	69	77.5	
	Minimum...	53	66	42	47	...	68	68	66	59	46	46	46	...	62	65	51	42	47	45	40	44	53	54	45	46	38	48	50	54	42	51.2 ^b	
Charlotteburg.....	Maximum...	86	82	71	80	85	82	21	88	73	75	71	73	73	82	79	66	69	70	63	69	69	77	74	66	60	72	80	77	74	54	74.0	
	Minimum...	45	66	36	39	50	60	62	63	60	47	38	40	37	53	65	52	34	37	43	31	36	48	60	47	36	51	47	54	41	47.5		
Dover.....	Maximum...	87	80	...	...	...	83	82	90	77	75	71	71	80	88	72	71	70	73	65	74	79	74	76	67	65	75	82	78	76	65	75.8	
	Minimum...	51	54	40	...	...	62	67	67	...	45	43	41	53	55	60	46	37	41	41	34	39	51	51	45	44	38	53	57	49	48.2		
Layton.....	Maximum...	86	78	76	80	86	86	84	90	77	77	76	78	81	88	77	71	...	...	75	66	74	77	76	69	65	77	83	81	76	57	77.4 ^b	
	Minimum...	50	60	37	41	50	64	63	65	60	40	41	41	47	52	65	50	36	...	...	42	40	51	58	42	42	34	50	49	52	41	48.7 ^c	
Newton.....	Maximum...	84	77	73	78	83	83	82	90	78	76	75	74	78	86	76	69	67	72	63	72	70	74	74	64	62	73	81	78	76	56	...	
	Minimum...	56	53	43	51	56	63	61	66	59	45	45	46	41	59	64	51	40	46	43	41	45	55	56	44	46	40	55	51	51	41	...	
Phillipsburg.....	Maximum...	88	82	76	84	90	86	86	93	78	79	76	80	82	89	82	72	73	77	69	76	75	79	76	65	66	75	85	83	77	57	78.5	
	Minimum...	55	67	44	47	58	64	68	67	60	50	47	46	54	60	67	50	43	47	45	39	43	53	58	46	48	40	51	59	54	43	52.4	
Sussex.....	Maximum	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Minimum	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<i>The Red Sandstone Plain.</i>																																	
Bayonne.....	Maximum...	88	81	...	80	87	79	80	93	80	76	74	73	80	88	80	...	...	...	...	...	...	...	...	...	...	...	84	...	85	...	...	...
	Minimum...	59	69	...	50	62	67	70	70	64	52	53	54	59	64	68	...	...	...	...	...	...	...	...	...	...	...	45	...	47	...	...	...
Bergen Point.....	Maximum...	89	82	72	80	88	79	83	93	78	76	73	75	80	90	80	73	76	74	65	73	72	79	76	69	66	74	81	80	80	60	76.9	
	Minimum...	56	64	47	51	50	65	...	67	64	52	53	54	55	62	67	57	44	48	49	42	46	54	58	48	48	54	61	51	45	51.9 ^a		
Boonton§§.....	Maximum...	87	81	76	79	87	81	86	93	78	78	74	74	79	86	77	72	73	72	65	73	72	79	76	69	66	74	81	80	80	60	76.9	
	Minimum...	49	...	41	...	...	...	...	...	...	...	...	...	...	...	...	63	53	38	40	44	35	39	48	58	48	42	34	47	50	60	44	
Elizabeth.....	Maximum...	90	85	80	86	90	84	89	98	84	76	72	79	85	93	82	78	75	78	71	79	76	80	82	72	69	78	88	86	84	65	81.1	
	Minimum...	54	67	63	48	58	66	68	68	60	52	50	49	52	61	63	55	44	46	39	43	52	61	46	44	39	52	55	57	43	53.3		
Flemington.....	Maximum...	89	81	79	82	89	84	86	94	78	79	72	79	86	89	79	73	75	76	67	76	77	82	81	79	67	68	78	80	85	78	78.8	
	Minimum...	54	67	41	46	56	66	70	69	63	51	49	46	52	59	68	53	44	45	47	40	43	50	61	48	48	39	49	56	55	45	52.7	
Highwood.....	Maximum...	86	79	71	77	84	76	82	90	73	72	68	72	77	85	76	70	67	71	61	72	70	74	76	67	63	72	81	80	79	58	74.3	
	Minimum...	51	59	41	49	58	62	67	70	57	46	46	45	51	56	65	52	41	43	45	39	44	51	59	46	46	38	53	53	53	43	51.0	
Jersey City.....	Maximum...	89	82	72	76	88	81	87	95	82	78	74	76	82	88	80	75	72	74	67	77	75	78	78	70	66	75	82	81	75	60	77.8	
	Minimum...	61	70	52	56	62	66	67	71	65	55	60	55	60	66	72	58	52	51	49	47	52	58	65	51	52	47	53	62	50	47	57.7	
Lambertville.....	Maximum...	87	81	74	77	87	83	85	91	78	76	74	74	79	85	86	70	78	74	64	73	73	77	76	66	66	73	82	81	76	58	76.6	
	Minimum...	59	67	48	51	63	66	71	71	64	50	49	48	59	63	68	55	49	50	48	44	47	54	63	51	49	44	53	59	58	47	55.6	
Little Falls.....	Maximum...	88	80	73	80	87	80	85	93	78	76	72	74	79	88	83	70	71	75	...	...	...	...	...	...	...	70	66	70	80	81	62	77.4 ^c
	Minimum...	54	55	43	47	57	64	69	69	55	48	47	46	53	56	62	50	43	45	43	41	44	52	55	46	45	40	60	56	52	40	51.2	
Newark.....	Maximum...	87	80	75	80	87	80	84	92	78	77	70	71	81	88	78	70	70	73	65	74	70	73	78	67	63	73	83	82	77	57	76.1	
	Minimum...	61	58	51	56	62	63	68	68	60	53	55	53	57	63	66	56	49	50	48	47	50	55	57	51	50	44	55	60	50	41	55.2	
New Brunswick.....	Maximum...	86	84	74	82	86	84	84	93	77	75	72	71	83	88	80	71	70	75	66	75	71	77	78	...	...	64	74	84	83	80	57	77.4 ^c
	Minimum...	56	66	46	50	61	65	70	69	62	50	51	50	55	62	66	55	47	46	43	41	45	51	61	49	47	41	53	61	54	45	53.9	
Palisades Park.....	Maximum...	87	80	76	80	88	80	86	94	75	77	73	73	81	89	79	72	71	73	67	76	73	75	78	68	66	75	84	82	79	60	77.2	
	Minimum...	52	50	41	49	60	63	67	69	50	47	49	47	52	57	62	48	41	44	42	39	42	50	50	47	43	38	57	59	50	36	50.0	
Paterson.....	Maximum...	90	83	79	84	90	81	84	95	80	76	76	81	91	80	74	73	68	77	73	77	73	77	80	74	67	78	86	84	79	65	79.3	
	Minimum...	56	...	47	50	62	63	69	70	63	53	51	50	58	57	69	57	46	47	48	42	47	54	64	50	49	48	56	57	63	46	54.9 ^a	
Plainfield.....	Maximum...	86	80	74	80	87	82	83	92	78	75	71	73	81	88	78	72	69	74	64	74	72	77	77	68	64	73	82	82	80	59	76.5	
	Minimum...	55	64	46	49	58	66	70	69	62	52	50	49	53	62	67	55	45	46	48	40	44	52	62	46	45	38	51	54	55	45	53.3	
Somerville.....	Maximum...	89	83	76	81	89	85	86	94	79	77	74	76	83	90	81	75	73	77	65	76	74	79	79	66	64	76	84	83	81	59	78.5	
	Minimum...	51	64	39	43	53	64	67	64	61	46	43	40	49	57	62	53	41	42	46	38	39	49	58	46	55	34	46	51	53	44	49.9	
South Orange.....	Maximum...	86	75	72	78	84	80	82	89	75	73	69	69	77	85	78	69	67	72	62	70	70	73	75	66	63	71	80	80	78	56	74.1	
	Minimum...	55	60	48	53	60	60	69	70	63	55	52	50	5																			



Scale of Shades.



Scale of Miles
0 1 2 3 4 5 6 7 8 9 10
0 1 2 3 4 5 6 7 8 9 10
0 1 2 3 4 5 6 7 8 9 10

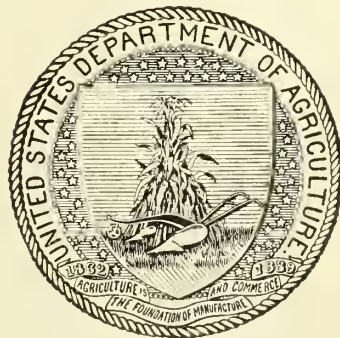
U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU
CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

OCTOBER, 1916.

BY
G. HAROLD NOYES
METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
NOVEMBER 18, 1916.

Departure of the Mean Temperature from the Normal, October, 1916.



Shaded portions show excess (+).
 Unshaded portions show deficiency (-).
 Lines show amount of excess or deficiency.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

VOL. XXIX. TRENTON, N. J., OCTOBER, 1916. No. 10.

GENERAL SUMMARY.

The Autumn weather of 1916 was very similar to that of last year: remarkably pleasant, with little rain and much sunshine. It was the driest October since 1909, and the coolest since 1911, and yet, was slightly above normal in warmth. There was, however, a restricted area along the coastal margin, where the temperature was slightly below normal, but on the whole there were but eight or nine days that were subnormal. There was a particularly warm period on the 8th and 9th, the temperatures going well above 80°; and the lowest temperatures occurred mostly on the 1st, 11th, 15th, 18th, and 27th. There were heavy frosts on the 1st and 11th, the latter reaching extreme southern portions of the State, and thus was provided the prerequisite for many days succeeding of fine "Indian Summer" weather. The 19th was the only day without an appreciable amount of sunshine, and preceded the day of lowest barometer reading of the month. In striking contrast to this year were the Octobers of 1913 and 1903, when it rained about every other day or every second day, and in amounts of from one to two inches per day, or to October 13th, 1906, when the thermometer fell to 11° in the extreme northern portions of the State, and there were snow flurries as far south as Cumberland County. This open weather has been favorable for out-door operations of all kinds, except for fall plowing and seeding, and the germination of grain and grass seed has suffered for lack of rain. Natural water courses are running low, and in some instances water was being hauled for stock.

The mean stage of the Delaware River at Phillipsburg was 2 feet. At Trenton the mean stage was 0.6 foot, which was 9 foot below normal.

Storm warnings were displayed along the coast on the 13th, 15th, 19th, 20th, and 25th.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 36 stations, was 55.1°, which was 1.1° below normal. A zone of low temperature reached southward from the northern highlands to the northern edge of Ocean County, but the warmest sections of the State were around New York Bay, and the southwestern counties bordering on the Delaware. The highest temperature was 92° at Tuckerton on the 9th, and the lowest, 23°, at Charlotteburg on the 27th. The highest monthly mean was 58.0° at Vineland, and the lowest, 50.0°, at Charlotteburg. The greatest daily range of temperature was 49° at Charlotteburg on the 8th.

PRECIPITATION.

The average rainfall for the State, as deduced from observations of 39 stations, was 1.37 inches, which was 2.34 inches below normal. The greatest deficiency occurred in southern Sussex County, Mercer, and Monmouth. In the watershed of the Passaic, where the greatest rain fell, the amount was also

below normal. The greatest monthly amount was 2.38 inches at South Orange, and the least, 0.51 inch, at Newton. The greatest rainfall in 24 consecutive hours was 2.08 inches at South Orange on the 19th, and this was the one typical Fall storm of the season thus far. The other principal rainy days were the 13th and 16th. The average number of days throughout the State, on which 0.01 inch or more rain fell, was 4, which was 4 below normal.

WIND.

The prevailing wind direction for the month was from the northwest, with an approximate velocity of 11 miles per hour, which was nearly normal. The highest velocity, sustained for five consecutive minutes, was 54 miles per hour from the south on the 19th. Gales also occurred on the 10th and 17th.

SUNSHINE AND CLOUDINESS.

The average number of clear days throughout the State was 18, which was 4 more than normal; partly cloudy, 8, which was normal; cloudy, 5, which was 4 fewer than normal. Sunshine approximated 69 per cent., which was appreciably more than normal.

MISCELLANEOUS.

Atmospheric pressure, reduced to sea level, was 30.16 inches, which was 0.09 inch above normal. Highest readings occurred on the 18th, and lowest on the 20th. A thunderstorm that was not generally noted occurred on the 20th. Sleet occurred at Atlantic City on the 10th. Killing frost occurred in extreme northern sections on the 1st, and in central and southern districts on the 11th and 18th. Solar halos occurred on the 3d, 18th, and 30th. Dense fog occurred in some portion of the State as frequently as every other day. The aurora was observed on the 1st, 2d, and 14th.

COMPARATIVE DATA FOR OCTOBER.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	0.01 inch or more prec.
1885.....	54.2	82	29	4.20	5.85	2.91	.....	.....	.....	.....
1886.....	55.6	85	21	3.22	8.16	2.02	.....	.....	.....	.....
1887.....	52.3	81	21	2.61	5.00	1.58	.....	.....	.....	7
1888.....	49.2	79	25	4.73	7.00	2.97	.....	.....	10	11
1889.....	50.8	82	23	3.80	5.03	2.42	.....	.....	12	11
1890.....	53.9	81	24	6.33	10.18	3.40	9	8	14	13
1891.....	52.8	82	18	3.44	5.57	1.88	11	11	9	8
1892.....	53.6	85	21	0.52	1.09	0.04	14	12	5	4
1893.....	55.2	85	17	4.22	6.59	1.74	15	7	9	7
1894.....	55.3	87	27	5.67	8.23	3.90	12	7	12	10
1895.....	49.9	81	18	3.60	5.53	1.62	19	7	5	5
1896.....	51.5	85	21	2.24	4.58	1.27	11	8	12	8
1897.....	55.8	88	22	2.43	6.49	0.87	14	8	9	7
1898.....	56.5	86	24	5.76	8.42	3.92	13	9	9	10
1899.....	56.6	86	19	2.72	4.65	1.07	13	10	8	6
1900.....	59.9	92	21	3.70	6.59	1.47	10	8	13	10
1901.....	54.4	82	21	1.93	4.45	0.87	17	8	6	4
1902.....	56.0	80	20	6.39	9.33	3.82	15	7	9	8
1903.....	55.9	86	24	8.92	16.19	4.17	13	6	9	8
1904.....	51.9	89	15	3.78	7.01	1.50	20	6	5	5
1905.....	55.5	90	17	2.71	4.83	0.75	18	7	6	7
1906.....	55.0	80	17	4.46	7.14	2.66	8	9	14	11
1907.....	50.6	80	18	4.46	7.18	2.70	22	5	4	7
1908.....	57.3	92	19	2.71	5.14	1.30	15	5	11	8
1909.....	51.2	84	18	1.18	1.82	0.40	17	7	7	8
1910.....	57.2	90	18	3.15	5.55	1.55	15	8	8	7
1911.....	53.0	80	18	5.49	8.23	2.61	10	9	12	12
1912.....	57.0	88	25	3.30	6.95	1.72	17	8	6	5
1913.....	57.8	83	25	7.79	13.84	2.70	12	9	10	11
1914.....	58.1	88	19	1.99	3.08	0.90	13	9	9	5
1915.....	56.2	84	23	3.03	5.18	1.89	17	7	7	9
1916.....	55.1	92	23	1.37	2.38	0.51	18	8	5	4

Climatological data for October, 1916.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation .01 in. or more.	Clear.	Pt. cloudy.			Cloudy.
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	25	53.4	+0.9	84	9	27	27	41	1.43	-2.41	1.01	0	4	24	5	2		Samuel J. Hixson. George S. Briggs. Brice E. Riker. William C. Harris. A. M. Depue.
Charlotteburg.....	Passaic.....	719	24	50.0	-0.4	85	8	23	27	49	1.61	-2.80	1.44	0	3	22	7	2	sw.	
Culvers Lake†.....	Sussex.....	848	15	.....	.....	.....	.....	24	10	.....	0.94	-2.71	0.71	0	6	23	4	4	e.	
Dover.....	Morris.....	600	32	51.3 ^a	+0.6	84	8	26	27	44	1.46	-2.54	1.16	0	3	17	9	5	.....	
Layton.....	Sussex.....	480	16	52.1	+2.5	85	8	24	18†	48	1.57	-1.76	1.36	0	6	25	3	3	sw.	
Newton.....	Sussex.....	769	35	52.9	+1.2	82	9	30	1†	35	0.51	-3.20	0.35	0	5	20	6	5	sw.	Irving G. Kern. D. Wilson Smith. George Dymock.
Phillipsburg.....	Warren.....	363	34	54.1	+1.2	84	8	30	18†	39	1.21	-2.39	0.71	0	7	22	5	4	s.	
Sussex.....	Sussex.....	442	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Means and extremes.....				52.3	+1.0	85	8	23	27	49	1.25	-2.54	1.44	0	5	22	5	4	sw.	
<i>The Red Sandstone Plain.</i>																				
Bayonne.....	Hudson.....	50	26																	Erskine R. Eadie. William H. Mitchell. J. W. Demmers. Miss M. A. Butler. L. B. Bonnett.
Bergen Point†.....	Hudson.....	37	19	56.6 ^a	+2.3	84	8	35	11†	37	1.86	-2.22	1.36	0	3	11	18	2	nw.	
Boonton.....	Morris.....	400	26	50.8	.....	85	9	26	15	47	1.20	-2.64	0.85	0	5	25	4	2	ne.	
Chatham.....	Morris.....	330	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Elizabeth.....	Union.....	45	37	56.6	+1.9	89	9	29	18	42	1.37	-2.45	1.08	0	3	18	8	5	sw.	
Flemington.....	Hunterdon.....	140	28	55.8	+1.7	88	9	29	27	48	0.85	-2.60	0.57	0	6	21	5	5	w.	Hiram E. Deats. Charles J. Bates. S. K. Pearson, Jr. Samuel W. Cochran. Montclair Water Co.
Highwood.....	Bergen.....	90	27	53.0	+0.3	83	9	27	18†	37	1.72	-2.81	1.20	0	4	16	11	4	se.	
Jersey City.....	Hudson.....	10	17	57.6	+2.0	87	9	38	18	30	1.11	-2.64	0.85	0	3	19	9	3	nw.	
Lambertville.....	Hunterdon.....	80	29	55.4	+1.8	81	8	34	15†	32	1.21	-2.66	1.02	0	3	20	10	1	sw.	
Little Falls.....	Passaic.....	180	13	52.8	.....	84	9	30	18†	37	2.08	-1.76	1.73	0	5	19	5	7	w.	
Newark.....	Essex.....	159	74	56.5	+2.1	86	9	37	1†	36	1.14	-2.63	0.90	0	3	20	1	10	n.	Prof. William Wiener. N. J. Experiment Station George P. Kirsten. Marion T. Probert. John Neagle.
New Brunswick.....	Middlesex.....	110	63	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Palisades Park.....	Bergen.....	80	1	52.0	.....	86	9	29	18†	41	1.44	.....	1.08	0	5	18	10	3	nw.	
Paterson.....	Passaic.....	80	45	56.8	+2.4	86	9	33	18	37	2.15	-2.00	1.80	0	4	4	12	15	nw.	
Plainfield.....	Union.....	100	30	54.8	+1.8	86	9	30	15†	38	1.78	-1.87	1.40	0	3	14	7	10	sw.	
Pompton Plains.....	Morris.....	195	14								1.25	-2.51	1.01	0	3					M. S. Taylor A. A. Macdonald. Dr. W. J. Chandler. U. S. Weather Bureau.
Somerville.....	Somerset.....	60	34	53.8	+0.4	87	9	25	27	43	1.23	-2.18	0.99	0	4	18	7	6	nw.	
South Orange.....	Essex.....	200	46	54.0	+1.1	81	9	32	27	30	2.38	-1.43	2.08	0	4	20	7	4	nw.	
New York, N. Y.....	.....	365	46	57.2	+1.6	84	9	39	10	34	0.63	-3.08	0.44	0	3	15	7	9	nw.	
Means and extremes.....				54.8	+1.6	89	9	25	27	48	1.52	-2.31	2.08	0	4	17	8	6	nw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	35	57.6	+0.9	89	9	32	15†	39	1.52	-2.01	1.25	0	3	23	3	5	sw.	Henry A. Jorden. D. S. B. McCoy. George L. Wilson. Frederick H. Hoeffer. Leon Dunbar.
Burlington.....	Burlington.....	12	30	57.4	+2.7	88	9	33	18†	36	1.19	-2.26	0.93	0	4	25	4	2	nw.	
Clayton.....	Gloucester.....	126	24	56.8	+1.7	90	9	28	15	41	1.48	-2.03	1.20	0	4	25	4	2	n.	
Hammonton.....	Atlantic.....	103	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Hightstown.....	Mercer.....	140	24	55.8 ^b	+2.1	88	9	28	18	40 ^c	0.81	-3.42	0.69	0	2	.....	.....	.....	.....	
Imlaystown.....	Monmouth.....	185	28																	H. E. Bullock. James M. Armstrong. R. W. Holman. Geo. L. Gillingham. William L. Flick.
Indian Mills.....	Burlington.....	76	27	56.2	+1.8	90	9	26	11	44	1.44	-2.14	1.05	0	5	16	11	4	s.	
Lakewood.....	Ocean.....	54	13	53.2	-2.1	85	9	27	18†	35	1.36	-2.34	1.06	0	4	17	7	7	nw.	
Moorestown.....	Burlington.....	75	54	56.6	+2.4	85	9	32	18	36	1.05	-2.59	0.85	0	2	21	7	3	nw.	
Northfield.....	Atlantic.....	25	9	.....	.....	.....	.....	.....	.....	.....	1.34	.....	1.02	0	6	.....	.....	.....	.....	
Pleasantville.....	Atlantic.....	26	18								1.60	-2.02	1.31	0	4	21	5	5		Lincoln Van Gilder. U. S. Weather Bureau. Frank R. Austin. E. V. C. Hendricks. Baron de Hirsch Agr. Sch.
Trenton.....	Mercer.....	190	45	56.1	+0.5	84	9	36	1	34	0.96	-2.45	0.77	0	4	14	11	6	n.	
Tuckerton.....	Ocean.....	23	23	55.4	+0.6	92	9	27	11†	40	1.57	-2.10	1.12	0	4	15	13	3	ne.	
Vineland†.....	Cumberland.....	87	48	56.8	+1.4	89	9	30	11	38	1.45	-2.01	1.18	0	7	10	8	13	se.	
Woodbine.....	Cape May.....	43	25	58.0	+2.4	86	8	29	11	39	1.99	-1.60	1.68	0	4	20	6	5	sw.	
Philadelphia, Pa.....		117	46	58.6	+2.3	86	9	40	1	32	1.21	-1.89	1.00	0	3	16	8	9	sw.	U. S. Weather Bureau.
Means and extremes.....				56.4	+1.3	92	9	26	11	44	1.37	-2.25	1.68	0	4	19	7	5	nw.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	27	55.4	-0.2	87	9	36	18	30				0	4	13	12	6	ne.	Wilbur H. Pancoast. U. S. Weather Bureau. U. S. Weather Bureau. William D. Martin, Jr. U. S. Weather Bureau.
Atlantic City.....	Atlantic.....	16	43	56.7	-0.7	77	9	40	22	26	1.28	-2.02	0.92	0	4	14	7	10	sw.	
Cape May City.....	Cape May.....	17	32	57.5	-2.1	82	9	39	18	26	0.90	-2.40	0.64	0	7	13	12	6	ne.	
Long Branch.....	Monmouth.....	25	9	54.5	.....	85	9	34	18	30	0.89	.....	0.71	0	2	20	7	4	sw.	
Sandy Hook.....	Monmouth.....	22	18	57.4	+0.7	84	9	43	18	29	0.92	-2.68	0.63	0	4	17	8	6	s.	
Means and extremes.....				56.3	-0.6	87	9	34	18	30	1.00	-2.37	0.92	0	4	15	9	7	sw.	
For the State.....				55.1	+1.1	92	9	23	27	49	1.37	-2.34	2.08	0	4	18	8	5	nw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

* Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Vineland is South Vineland.

Daily precipitation for October, 1916.

Stations.	Day of month.																															Total.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
The Highlands and Kittatinny Valley.																																	
Lividere.....													.19				.12		1.01	.11												1.44	
Charlotteburg.....									T.				.10				.07		1.44													1.61	
Ivers Lake.....									.02				.03	.17			.01		.54	.17												0.94	
Overton.....									.20				.20				.10		1.16													1.46	
Winton.....									.05				.13	.02			.01		1.02	.34												1.57	
Winton.....													.13	.02			.01		.27	.08												0.51	
Hilpsburg.....									.01				.27	.02			.06	.08	.71	.06	T.												1.21
Essex.....																																	
The Red Sandstone Plain.																																	
Yonnie.....																			1.36	T.													
Wegen Point.....									T.				.22				.28		.01	.85	.03											1.86	
Winton.....														.18			.13	T.														1.20	
Watham II.....																																	
Waboth.....									T.				.24				.05	T.	1.08													1.37	
Wilmington.....													.16	.04			.04	T.	.57	.02	.02											0.85	
Wghwood.....									T.				.25				.13	.14	1.20													1.72	
Wey City**.....									T.				.18				.08		.85						T.							1.11	
Wmberville.....													.17				T.	.02	1.02													1.21	
Wle Falls**.....													.23		T.		.10	.02	1.71	.02												2.08	
Wark**.....									T.				.18			T.	.06		.90													1.14	
W Brunswick.....																																	
Wisades Park.....									T.				.19				.15	.02	*	1.08					T.							1.44	
Werson.....													.20				.12		1.80	.03												2.15	
Winfeld**.....													.32				.06	T.	1.40													1.78	
Wmpton Plains II.....														.18			.06		T.	1.01												1.25	
Wnerville.....													.18	.04					.99	.02												1.23	
Wth Orange.....													.18				.10	T.	2.08	.02												2.38	
W York, N. Y.***.....									T.				.13			T.	.06	T.	.44		T.					T.				T.	T.	T.	0.63
The Southern Interior.																																	
Wdgeton.....									T.				.22			T.	.05		1.25													1.52	
Wrlington.....							T.		T.				.15	.11				.91	.02													1.19	
Wyton.....													.26				.02		1.17	.03												1.48	
Wmmonon.....																																	
Wghtstown.....													.12						.69													0.81	
The Sea Coast.																																	
Wlaystown.....																																	
Wlan Mills.....													.06	.25			.04		1.05		.04											1.44	
Wewood.....													.22					1.06	.02	.06					T.							1.36	
Wrestown.....													.20					.85														1.05	
Wthfield.....													.18	.08			T.	.02	1.02		.02											1.34	
Wasantville.....													.26				.02	T.	1.31		.01											1.60	
Wnton***.....									.02				.15				.02	T.	.77		T.											0.96	
Wkerton.....										.08			.30					1.12			.07											1.57	
Weland.....				.01	.01				T.	.01			.22				T.	.01	1.18	.01												1.45	
Wodbine.....													.05	.26				T.	1.50	.18												1.99	
Wladelphia, Pa.***.....						T.			T.				.20			T.	.01	T.	1.00	T.												1.21	
The Sea Coast.																																	
Wbury Park**.....						.01							.10	.01			T.	T.		\$.17						T.						\$0.29	
Wantic City***.....						T.							.28				.02		.92		.06											1.28	
Wbe May City***.....													.19			T.	.01	.02	.64	.01	.02										0.90		
Wng Branch**.....									.01				.17			T.	T.		.71						T.							0.89	
Wdy Hook***.....									T.				.25				T.	.02	.63		.02											0.92	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded.

|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.

* Precipitation included in the next following measurement. **Precipitation for 24-hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.			Moisture.		Sun-shine	
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	Percentage of possible sunshine.
							Miles per hour.	Direction.	Date.			
Antic City.....	30.17	30.48	18	29.70	21	s	28	s.	19	79	74	68
Bury Park.....	30.18	30.47	18	29.72	20	s	34	se.	19			
De May City.....												
Eng Branch.....												
Wark.....						6	36	nw.	9	*62	†57	70
New York, N. Y.....	30.14	30.49	18	29.65	20	16	63	nw.	17	68	66	70
Isades Park.....	30.14	30.48	18	29.65	20							
Philadelphia, Pa.....	30.18	30.51	18	29.61	20			ne.	10	72	61	68
Sandy Hook.....	30.14	30.51	18	29.61	20	15	54	s.	19	76	72	73
Winton.....	30.14	30.47	18	29.62	20	11	44	nw.	17	77	67	67

§ Two directions and dates

* 7 a. m. † 9 p. m.

Daily temperatures for October, 1916.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
<i>The Highlands and Kittatinny Valley.</i>																																	
Belvidere.....	Maximum...	64	70	72	76	78	79	76	82	84	65	69	65	64	62	61	68	66	61	66	78	70	61	60	65	66	63	63	66	66	65	68	68.4
	Minimum....	31	33	35	47	41	52	48	43	43	35	31	35	41	32	29	49	45	28	45	63	41	31	30	29	33	30	27	31	32	47	49	38.4
Charlotteburg.....	Maximum...	57	64	69	70	74	78	73	85	77	52	61	67	58	54	57	61	58	53	59	73	68	60	56	63	55	54	56	61	57	63	67	63.2
	Minimum....	28	29	29	41	33	48	49	36	63	32	25	28	34	38	24	48	53	26	39	59	45	37	26	25	25	45	23	34	24	50	46	36.9
Dover.....	Maximum...	61	66	71	71	79	80	75	84	83	54	64	65	62	60	60	64	54	64	67	76	67	57	57	63	62	59	56	61	60	65	66	65.6 ^a
	Minimum....	30	31	32	...	38	51	46	40	52	32	29	32	37	35	27	56	36	27	42	60	41	34	30	28	29	35	26	30	27	49	48	37.0 ^a
Layton.....	Maximum...	65	70	70	79	80	82	77	85	84	59	77	70	60	58	56	69	60	58	63	78	73	55	58	63	64	59	57	65	63	63	70	67.4
	Minimum....	26	32	33	41	41	49	44	37	58	32	29	30	35	37	25	49	45	24	42	63	43	30	27	28	29	43	24	27	26	45	46	36.8
Newton.....	Maximum...	58	65	69	76	77	78	75	81	82	60	63	67	60	55	59	65	61	55	66	76	69	57	54	60	61	57	56	62	61	64	61	64.8
	Minimum....	30	35	38	48	45	60	51	46	60	32	35	37	43	36	31	49	42	30	43	61	43	34	32	31	35	44	30	37	34	49	49	41.0
Phillipsburg.....	Maximum...	62	69	72	77	79	80	78	84	82	73	65	69	63	58	61	66	60	58	67	79	74	57	56	61	64	59	59	62	63	62	61	67.1
	Minimum....	32	35	36	49	42	57	52	45	61	35	33	36	46	38	31	52	47	30	45	65	44	36	33	32	33	38	30	34	32	46	49	41.1
Sussex.....	Maximum...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Minimum....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<i>The Red Sandstone Plain.</i>																																	
Bayonne.....	Maximum...	61	67	72	70	80	81	77	84	83	65	64	67	69	...	63	66	68	58	73	72	60	58	...	62	62	59	65	62	67	67	68.3 ^a	
	Minimum....	39	42	40	50	47	58	59	47	57	39	35	40	46	40	35	52	45	35	45	65	49	39	40	45	37	47	35	37	37	54	54	44.8
Bergen Point.....	Maximum...	65	71	78	77	78	80	80	82	85	56	67	69	67	58	61	67	68	58	70	78	63	58	59	66	63	61	57	65	68	68	64.8	
	Minimum....	29	30	31	41	35	47	55	39	57	35	30	30	35	41	26	37	55	27	38	49	49	31	30	27	29	27	23	27	38	50	36.7	
Boonton§§.....	Maximum...	68	71	74	74	83	84	82	86	89	73	67	70	69	63	62	70	68	60	65	82	72	65	61	68	65	65	61	68	68	69	67	70.6
	Minimum....	32	37	36	48	43	61	55	44	63	38	34	36	39	39	31	52	49	29	45	65	53	34	37	32	33	49	30	35	33	51	53	42.5
Elizabeth.....	Maximum...	67	67	76	74	81	83	81	85	88	74	67	71	65	62	68	68	65	59	67	82	74	61	58	68	66	64	61	67	70	68	66	70.1
	Minimum....	34	35	37	48	42	65	60	45	40	37	34	36	38	42	30	52	50	31	44	65	47	38	35	32	34	46	29	33	31	49	49	41.5
Flemington.....	Maximum...	58	64	69	67	76	78	72	81	83	63	63	66	66	56	61	64	67	55	65	75	57	59	56	61	61	60	56	61	64	67	64	65.0
	Minimum....	36	33	34	45	50	59	53	44	62	38	32	34	44	42	30	51	44	27	45	64	47	33	33	29	31	40	27	31	29	52	51	40.9
Highwood.....	Maximum...	61	67	72	71	75	81	78	83	87	65	66	68	68	61	63	64	66	57	64	75	65	60	58	61	60	61	58	65	62	66	65	66.9
	Minimum....	40	44	46	52	51	58	60	53	65	41	41	48	55	43	40	53	48	38	49	64	52	41	43	40	41	51	40	43	42	57	55	48.2
Jersey City.....	Maximum...	61	66	70	69	77	80	76	81	80	70	63	69	62	57	60	64	62	59	66	78	74	59	58	61	63	62	59	61	66	66	63	66.5
	Minimum....	38	37	39	50	46	59	58	49	62	39	36	39	46	45	34	54	...	34	48	65	48	40	37	36	37	46	34	36	34	51	52	44.3 ^a
Lambertville.....	Maximum...	61	66	73	73	76	79	75	80	84	56	64	64	66	64	61	66	67	56	69	78	70	59	58	62	61	61	58	60	62	68	65	66.5
	Minimum....	33	34	36	47	40	57	48	44	53	35	33	35	39	37	32	48	38	30	45	65	45	37	34	32	33	30	30	33	32	35	38	39.0
Little Falls.....	Maximum...	62	66	72	72	78	79	77	82	86	56	64	65	67	57	60	66	66	55	68	77	68	59	58	63	60	60	56	65	61	67	65	66.4
	Minimum....	37	43	45	53	50	59	58	52	50	39	42	43	48	43	37	52	42	38	49	67	46	42	41	41	42	46	41	46	42	56	54	46.6
Newark.....	Maximum...	63	67	72	70	79	82	78	84	86	55	65	66	67	58	59	66	65	55	67	76	65	60	58	62	60	61	57	65	63	67	63	66.5
	Minimum....	34	36	35	46	42	58	47	43	48	32	32	35	44	35	30	51	32	29	47	63	39	34	36	30	33	34	29	34	32	52	48	39.4
Palisades Park.....	Maximum...	65	70	74	73	82	83	80	82	86	59	67	62	67	61	63	68	70	59	66	78	74	64	62	66	61	63	60	66	64	69	66	68.6
	Minimum....	36	37	41	55	45	59	59	49	64	39	37	40	48	41	34	52	48	33	45	65	53	39	38	35	37	51	35	39	36	51	54	45.0
Paterson.....	Maximum...	62	66	71	69	77	80	75	82	86	63	64	65	68	58	61	66	65	68	80	68	60	57	63	64	62	61	65	64	67	66	67.0	
	Minimum....	33	42	37	50	40	58	56	44	61	38	32	37	41	42	30	51	43	32	44	65	49	35	40	37	34	47	37	33	35	52	54	42.6
Plainfield.....	Maximum...	64	69	74	71	80	80	79	84	87	76	65	73	67	59	62	68	65	58	67	81	70	60	60	64	62	62	61	64	66	67	66	68.7
	Minimum....	28	33	33	44	37	55	51	41	55	36	29	32	35	41	26	51	45	27	41	62	48	32	36	34	32	44	25	29	26	48	38.9	
Somerville.....	Maximum...	59	65	69	70	76	76	72	78	81	58	61	63	65	55	60	64	65	53	67	75	68	56	55	60	59	58	55	59	60	65	63	64.2
	Minimum....	38	45	40	50	46	59	55	48	58	38	37	39	44	34	34	51	41	34	45	67	46	38	40	36	36	46	32	38	38	53	52	43.9
South Orange.....	Maximum...	60	67	72	69	74	77	75	79	84	54	63	63	65	57	59	64	66	55	66	73	67	58	57	61	59	61	55	64	58	67	67	65.0
	Minimum....	42	50	54	59	57	59	60	58	50	39	42	52	54	43	41	52	44	39	48	65	47	42										



Scale of Shades.



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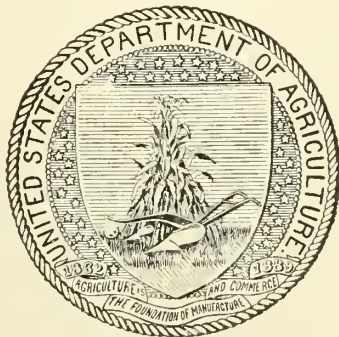
JAN - 8 1917

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

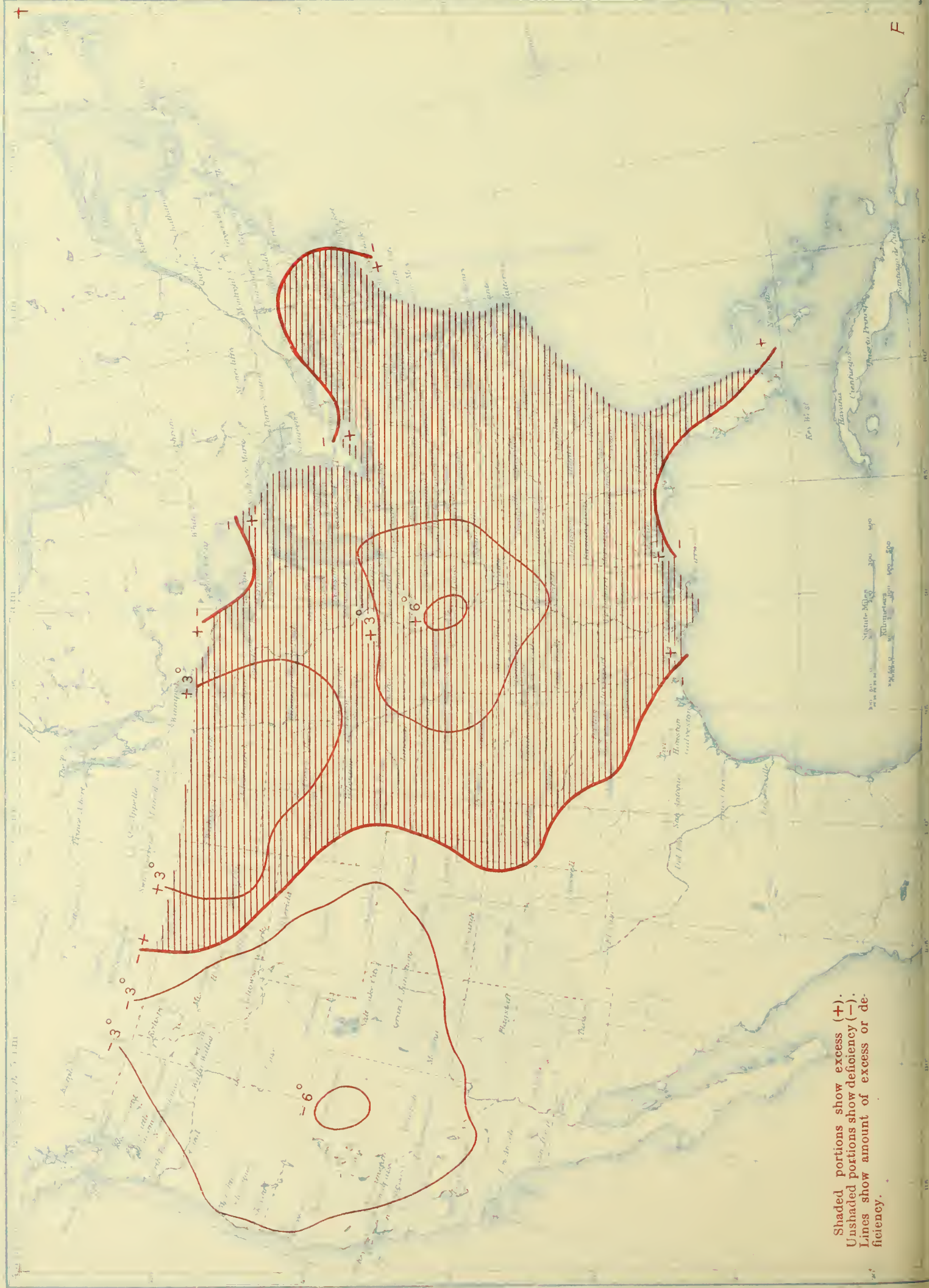
NOVEMBER, 1916.

BY
G. HAROLD NOYES
METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
DECEMBER 21, 1916.

Departure of the Mean Temperature from the Normal, November, 1916.



Shaded portions show excess (+).
Unshaded portions show deficiency (-).
Lines show amount of excess or deficiency.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

VOL. XXIX. TRENTON, N. J., NOVEMBER, 1916. No. 11.

GENERAL SUMMARY.

The advent of the more rigorous characteristics of winter were notably absent in weather conditions of November, 1916, in New Jersey. Except in a few widely scattered instances there was not enough snow to measure, and only in the northernmost counties were there many consecutive days of freezing weather. The sky was unusually clear, with a high percentage of possible sunshine. The occurrences of rain were much the same as in recent years, both as to frequency and amount. There was a general absence of notable weather features during the month, and for a like reason the usual out-of-door occupations of this time of year were more than ordinarily favored by pleasant weather. The moderate excess of temperature and deficiency of rain of earlier months of Autumn continued through November, and the month practically terminated with clearing weather following a warm rain. The third week of the month was most distinctly subnormal in warmth, while the remainder, except for a few scattered days, was above. It has been a remark of frequent hearing, that the weather of the month has been particularly fine.

Vegetation in need of moisture for better withstanding the winter has been adequately supplied, but well water supplies are running low, and there is some apprehension that there will not be enough before the freezing of the ground. Stream flow is below normal, and natural ice supplies may be impaired by reason of low water level.

The principal rainy days of the month were the 1st, 4th, 5th, 12th, 13th, 23d, 29th, and 30th. There were also scattered occurrences on the 10th, 14th, and 15th. There were a few flakes of snow in practically all except the southwestern portions of the State on the 15th, and in the extreme northern section, on the 26th, there was about half an inch.

The mean stage of the Delaware River at Phillipsburg was 1.2 feet. At Trenton the mean stage was 0.6 foot, which was 0.7 foot below normal.

Storm warnings were displayed at coast stations on the 9th, 5th, 23d, and 24th.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 36 stations, is 45.6° , which is 0.9° above normal. The extreme northern parts of the State were about 8° colder than Cape May. The highest temperature for the month was 75° at Culvers Lake on the 26th. The greatest daily range of temperature was 42° at Flemington on the 9th. In some instances temperatures were slightly below normal in scattered central and northern localities.

PRECIPITATION.

The average total precipitation of the State, as deduced from observations of 41 stations, was 2.11 inches, which was 1.29

inches below normal. In some of the extreme northern sections, the amounts were slightly above normal. Snowfall averaged, trace. The greatest monthly amount was 3.81 inches at Charlottetown, and the least, 0.80 inch at Asbury Park. The greatest amount in 24 consecutive hours was 1.67 inches at Culvers Lake on the 30th. The average number of days throughout the State on which 0.01 inch or more precipitation occurred was 8, which was normal.

WIND.

The prevailing wind direction for the month was from the northwest, with an approximate velocity of 12 miles per hour. The highest velocity sustained for 5 consecutive minutes was 60 miles per hour from the northwest at Long Branch on the 24th.

SUNSHINE AND CLOUDINESS.

The average number of clear days throughout the State was 16, which was 4 more than normal; partly cloudy, 5, which was 4 less than normal. The average per cent. of possible was 60, which was approximately normal.

MISCELLANEOUS.

Atmospheric pressure, reduced to sea level, was 30.15 inches, which was 0.05 inch above normal. Highest pressure readings occurred on the 6th, 26th, and 27th; and lowest on the 23d.

Dense fog was generally reported on the 7th, 8th, 9th, 13th, and 14th. At a few scattered points, the first killing frosts of Autumn occurred on the 7th, 15th, 16th, and 17th. Sleet in limited amounts fell on the 14th and 15th. Solar halos were observed along the coast on the 22d and 26th, and a lunar halo on the 9th.

COMPARATIVE DATA FOR NOVEMBER.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more prec.
1885.....	44.8	76	18	4.53	7.90	2.72	.....	.....	.....	.....
1886.....	44.5	73	17	4.49	6.24	3.45	.....	.....	.....	.....
1887.....	41.5	72	13	1.94	2.60	0.95	.....	.....	.....	6
1888.....	45.8	77	8	3.97	5.41	2.66	.....	.....	.....	10
1889.....	45.7	69	13	8.48	11.45	4.70	.....	.....	.....	13
1890.....	43.8	74	11	0.82	1.70	0.58	13	12	5	13
1891.....	42.2	70	6	2.39	3.47	1.54	12	10	8	8
1892.....	41.9	71	12	7.29	9.49	4.74	8	9	13	4
1893.....	41.8	70	11	3.48	4.53	2.19	10	11	9	11
1894.....	40.3	76	11	3.34	5.12	1.77	13	7	10	7
1895.....	45.7	80	12	3.17	5.10	1.56	12	7	11	10
1896.....	48.2	78	12	3.05	5.68	1.37	9	9	12	10
1897.....	43.8	74	10	4.59	5.95	2.42	8	11	11	8
1898.....	42.4	70	11	6.76	9.07	3.83	10	9	11	12
1899.....	44.0	71	17	2.29	4.32	0.72	15	8	7	14
1900.....	47.5	79	15	3.43	5.54	1.82	9	10	11	9
1901.....	38.5	69	10	2.38	4.23	1.18	12	9	9	6
1902.....	49.3	80	20	2.20	4.17	0.87	10	11	9	8
1903.....	39.9	79	3	1.26	2.03	0.75	16	8	6	8
1904.....	40.2	69	6	2.18	3.40	1.30	12	10	8	6
1905.....	42.1	70	6	1.84	2.86	0.54	12	10	8	6
1906.....	43.6	70	8	1.61	2.52	1.06	16	7	7	6
1907.....	43.5	68	13	5.65	6.95	4.19	10	8	12	13
1908.....	43.1	72	2	0.96	1.29	0.35	14	8	8	4
1909.....	46.4	80	17	2.36	4.33	1.32	13	8	9	8
1910.....	40.4	71	12	3.79	5.73	1.63	5	13	12	9
1911.....	41.3	73	13	5.17	6.50	3.17	8	11	11	10
1912.....	45.3	76	11	3.43	8.12	2.02	15	8	7	6
1913.....	46.2	77	19	2.71	4.89	1.00	14	7	9	6
1914.....	43.3	80	6	2.60	4.81	1.21	16	8	6	6
1915.....	44.0	75	16	1.69	3.11	0.96	14	8	2	8
1916.....	43.3	75	11	2.11	3.81	0.80	16	5	9	8

Climatological data for November, 1916.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.							Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation .01 in. or more.	Clear.	Pt. cloudy.	Cloudy.		
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	25	40.6°	-0.6	67	2	18	22	39	2.67	-0.82	1.14	0	5	19	1	10	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	24	39.0	-1.5	65	9	12	22†	35	3.81	+0.08	1.55	T.	9	20	5	5	sw.	George S. Briggs.
Culvers Lake†.....	Sussex.....	848	15	.....	.....	.....	.....	.....	11	26	3.33	+0.51	1.67	0.6	9	17	2	11	w.	Brice E. Riker.
Dover.....	Morris.....	600	32	39.8	-0.5	69	9	15	22	38	3.36	-0.27	1.55	0	9	12	7	11	.....	William C. Harris.
Layton.....	Sussex.....	480	16	39.3	+0.9	66	9	12	26	36	3.18	+0.10	1.34	0.4	9	19	5	6	sw.	A. M. Depue.
Newton.....	Sussex.....	769	35	40.3	+0.5	68	9	18	22	32	2.77	+0.17	1.14	T.	7	12	4	14	w.	Irving G. Kern.
Phillipsburg.....	Warren.....	363	34	41.6	0.0	70	9	19	22	36	2.37	-0.91	0.99	T.	13	16	2	12	sw.	D. Wilson Smith.
Sussex.....	Sussex.....	442	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	George Dymock.
Means and extremes...				40.1	-0.2	70	9	11	26	39	3.07	-0.21	1.67	0.1	9	16	4	10	sw.	
<i>The Red Sandstone Plain.</i>																				
Bergen Point††.....	Hudson.....	37	19	43.8	+0.8	72	9	22	22†	32	1.90	-1.68	1.04	T.	6	8	16	6	nw.	William H. Mitchell.
Boonton.....	Morris.....	400	§26	40.2 ^b	.....	70	9	12	26	33	2.99	-0.68	1.45	T.	9	.....	.....	.....	sw.	J. W. Demmers.
Chatham.....	Morris.....	330	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Miss M. A. Butler.
Elizabeth.....	Union.....	45	37	43.8	+0.2	73	9	18	22	36	1.94	-1.40	1.09	T.	10	15	7	8	nw.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	28	42.9	+0.1	73	9	17	22	42	1.93	-1.42	0.68	0	11	17	3	10	w.	Hiram E. Deats.
Highwood.....	Bergen.....	90	27	41.0	-1.3	68	9	16	22	31	2.35	-1.28	1.08	T.	9	14	6	10	nw.	Charles J. Bates.
Jersey City.....	Hudson.....	10	17	45.2	+1.6	70	9	25	26	29	1.71	-1.69	0.93	T.	8	15	7	8	nw.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	29	44.8	+1.8	71	9	23	22	32	1.96	-1.65	0.88	0	9	16	7	7	nw.	Samuel W. Cochran.
Little Falls.....	Passaic.....	180	§13	41.7	.....	68	9	19	26	30	2.42	-1.10	1.25	.....	8	19	5	6	w.	Montclair Water Co.
Newark.....	Essex.....	159	74	43.9	+1.0	70	9	25	26	27	1.81	-1.69	1.08	T.	6	17	0	13	nw.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	110	63	.....	.....	.....	.....	19	22	.....	1.95	-1.64	1.08	T.	6	19	1	10	nw.	N. J. Experiment Station.
Palisades Park.....	Bergen.....	80	1	41.0	.....	70	9	18	22	29	1.94	.....	0.96	T.	7	16	5	9	nw.	George P. Kirsten.
Paterson.....	Passaic.....	80	45	44.2	+0.9	71	9	23	22†	33	2.21	-1.05	1.30	T.	9	.....	.....	.....	nw.	Marion T. Probert.
Plainfield.....	Union.....	100	30	43.0	+1.0	72	9	18	22	35	1.82	-1.77	0.96	T.	11	14	4	12	sw.	John Neagle.
Pompton Plains.....	Morris.....	195	14	.....	.....	.....	.....	.....	.....	.....	2.64	-0.85	1.31	T.	6	.....	.....	.....	.....	M. S. Taylor
Somerville.....	Somerset.....	60	34	41.0	-1.2	72	9	12	22	37	2.09	-1.30	1.12	0	7	11	8	11	sw.	A. A. Macdonald.
South Orange.....	Essex.....	200	46	42.5	+0.9	66	9	22	22	28	1.85	-1.52	0.94	T.	8	16	5	9	nw.	Dr. W. J. Chandler.
New York, N. Y.....	.....	365	46	44.7	+0.7	69	9	25	26	25	1.57	-1.87	0.76	T.	8	13	4	13	sw.	U. S. Weather Bureau.
Means and extremes...				42.8	+0.5	73	9	12	22†	42	2.09	-1.38	1.45	T.	8	15	6	9	nw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	35	46.0	+1.1	75	9	20	22	34	2.07	-1.19	0.65	0	7	21	1	8	sw.	Henry A. Jorden.
Burlington.....	Burlington.....	12	§30	44.9	+0.9	73	9	22	26	34	1.59	-2.15	0.64	0	8	18	4	8	nw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	24	44.2	+0.8	74	9	18	22	36	2.23	-1.30	0.76	0	7	21	4	5	n.	George L. Wilson.
Hammononton.....	Atlantic.....	103	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Frederick H. Hoeffer.
Hightstown.....	Mercer.....	140	24	44.4	+0.8	74	9	16	22	35	1.72	-1.94	0.80	0	6	.....	.....	.....	.....	G. Franklin Elridge.
Imlaystown.....	Monmouth.....	185	28	.....	.....	.....	.....	.....	.....	.....	1.48	-1.88	0.90	.....	7	21	1	8	.....	H. E. Bullock.
Indian Mills.....	Burlington.....	76	27	44.2	+0.8	75	9	14	22	39	2.07	-1.53	0.51	T.	8	16	5	9	nw.	James M. Armstrong.
Lakewood.....	Ocean.....	54	13	42.6	-0.6	71	9	14	22	37	1.65	-2.00	0.56	T.	10	15	2	13	w.	R. W. Holman.
Moorestown.....	Burlington.....	75	54	45.5	+2.5	74	9	20	22	36	1.60	-1.82	0.63	T.	7	14	12	4	nw.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	9	.....	.....	.....	.....	.....	.....	.....	1.81	.....	0.56	T.	9	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	18	.....	.....	.....	.....	.....	.....	.....	1.48	-1.88	0.90	.....	7	21	1	8	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	45	43.7	-0.7	70	9	24	26	29	1.31	-2.12	0.55	T.	8	15	3	12	w.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	23	44.2 ^b	+0.2	71	9	16	26	38	2.16	-1.30	0.88	0	7	18	4	8	nw.	Frank R. Austin.
Vineland†.....	Cumberland.....	87	48	45.3	+1.4	73	9	19	22	32	1.83	-1.47	0.60	T.	10	11	6	13	w.	E. V. C. Hendrickses.
Woodbine.....	Cape May.....	43	25	45.9	+1.9	72	9	18	22	31	2.25	-0.90	0.82	T.	10	19	4	7	w.	Baron de Hirsch Agr. Sch.
Philadelphia, Pa.....		117	46	46.8	+1.9	72	9	28	16	27	1.48	-1.58	0.62	T.	8	16	1	13	sw.	U. S. Weather Bureau.
Means and extremes...				44.6	+0.8	75	9	14	22	39	1.83	-1.63	0.90	T.	8	17	4	9	nw.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	27	44.4	+0.2	71	9	22	26	28	0.80	-2.47	0.36	T.	5	12	9	9	sw.	Wilbur H. Pancoast.
Atlantic City.....	Atlantic.....	16	43	47.2	+1.7	67	2	25	26	25	2.00	-1.23	0.69	T.	10	17	4	9	sw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	32	47.8	+0.4	68	2	29	16	26	1.92	-1.30	0.50	0.3	9	17	6	7	s.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	9	42.8	.....	71	9	22	22†	35	1.34	.....	0.72	T.	8	14	3	13	sw.	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	18	45.7	+1.2	68	9	28	26	22	1.51	-2.25	0.62	T.	7	16	4	10	sw.	U. S. Weather Bureau.
Means and extremes...				45.6	+0.9	71	9	22	22†	35	1.51	-1.81	0.72	0.1	8	15	5	10	sw.	
For the State.....				43.3	+0.5	75	9	11	26	42	2.11	-1.29	1.67	T.	8	16	5	9	nw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

* Received too late to be included in the means.

Reference letters, a, b, °, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Vineland is South Vineland.

Daily precipitation for November, 1916.

Stations.	Day of month.																															Total.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>The Highlands and Kittatinny Valley.</i>																																	
Belvidere.....	.38				.15																		1.00						*	1.14		2.67	
Charlotteburg.....	.30				.38				.05		*	.05	T.										*	1.48		T.			*	1.55		3.81	
Culvers Lake.....	.36			T.	.09	T.			.01				.02										.61	.55		.01			.01	1.67		3.33	
Dover.....	.18			*	.04				.02			*	.05										1.52						*	1.55		3.36	
Layton.....	.20			.03	.20				.03				.03										.68	.65	T.	.02			T.	1.34		3.18	
Newton.....	.33			T.	.08	T.			T.				T.	.01	T.		T.						.91	.30	T.				.01	1.13		2.77	
Phillipsburg.....	.20			.07	.07	.01			.04			.01	.01	.01	.01		T.	T.					.64	.35						.09	.86		2.37
Sussex.....																																	
<i>The Red Sandstone Plain.</i>																																	
Bergen Point.....	*			.18	.24				T.		T.	T.		T.	T.								*	1.04						.44		1.90	
Boonton.....	.16				.02	.01			T.				.04	.01	.01					.01										1.28		2.99	
Chatham H.....																																	
Elizabeth.....	.12			.05	.13				.01		T.	.03	.01	T.									*	1.09	T.				*	.50		1.94	
Flemington.....	.11			*	.08				.02		.02	.01	.03	T.			T.			T.			.58	.38						.02	.68		1.93
Highwood.....	.17			.02	.33							.04	T.	.06	T.	T.	T.						1.06	.02		T.			.04	.61		2.35	
Jersey City**.....	.11			.01	.15				T.			.04	.01	T.	T.	T.							.93						.06	.40		1.71	
Lambertville.....	.14			.10	.02							.02	.11										.40	.48					.01	.68		1.96	
Little Falls**.....	.14			T.	.12						.08	.02	T.								.03		1.25						.18	.60		2.42	
Newark**.....	.11			T.	.10				T.			.01	T.	T.	T.								1.08	T.					.08	.43		1.81	
New Brunswick.....	.11				.09	T.			T.				.09				T.						.49	.59					T.	.58		1.95	
Palisades Park.....	.10				.25								.04	.03	T.	T.	T.							.96					*	.56		1.94	
Paterson.....	.12				.16	.02						.03	.02	.03	T.		T.	T.					1.30	.17					T.	.36		2.21	
Plainfield**.....	.14			.05	.04				.06	.02		.04	.05	.03	T.	T.	T.						.96							.07	.36		1.82
Pompton Plains H.....	.21				.04	.19						.07			T.									1.31						.82		2.64	
Somerville.....	.14				.05				.08				.09	T.									.96	.16					T.	.61		2.09	
South Orange.....	.10			T.	.13				T.	T.		T.	.02	.02	T.								.91	.03					.04	.60		1.85	
New York, N. Y.***.....	.10			.01	.20				T.			.03	T.	.01	T.	T.							.76	T.					.06	.40		1.57	
<i>The Southern Interior.</i>																																	
Bridgeton.....	.05			.12					.15			.65											.60						.05	.45		2.07	
Burlington.....	.10				.07				T.			*	.20										.27	.37					.05	.53		1.59	
Clayton.....	.11				.10							.49	.27										.60						.12	.54		2.23	
Hammonton.....																																	
Hightstown.....	.10				.10								.10	.04									.80							.58		1.72	
Imlaystown.....																																	
Indian Mills.....	.11				.12				.10		T.	.50	.03	T.									.20	.51					T.	.50		2.07	
Lakewood.....	.07			.08	.10				.02	.02		T.	.22	T.	.02								.18	.38					T.	.56		1.65	
Moorestown.....	.10			.05	T.				.10			.14			T.								.25	.38					T.	.58		1.60	
Northfield.....	.03				.08				.17			.28	.45	.03	T.								.13	.08						.56		1.81	
Pleasantville.....				.07	.05				.05		.77	.13		T.	T.								.15										
Trenton***.....	.10			.04	.02				T.		.12	T.	.01	T.									.55	.42					.05	.42		1.31	
Tuckerton.....				.20					.19			.88	.02										.07	.34						.46		2.16	
Vineland.....	.08				.03				.16		.18	.37	.01	T.									.27	.33					.02	.38		1.83	
Woodbine.....	.06				.07			.05	.28		.44	.82	.05	.04										.32						.12		2.25	
Philadelphia, Pa.***.....	.06			.09	.02				T.	.02		.10	T.	T.	T.								.57						.14	.48		1.48	
<i>The Sea Coast.</i>																																	
Asbury Park**.....	.02			T.	T.							.18	.01	T.	T.	T.							.23						T.	.36		0.80	
Atlantic City***.....	.01			.03	.09	T.			.22		.69		.02	.02	T.								.40							.01	.51		2.00
Cape May City***.....	.04			.04	T.				.36		.47	.02	.16	.07									.26							.50		1.92	
Long Branch**.....				.04	.01						.09			.01	T.								.72	T.						.40		1.34	
Sandy Hook***.....	.05			.03	.12						.08	T.	T.	T.		.01				.01			.60						T.	.62		1.51	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded.

‡ ‡ Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.

* Precipitation included in the next following measurement. **Precipitation for 24-hour period from midnight to midnight. T, Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.			Moisture.		Sun- shine	
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	Percentage of possible sunshine
							Miles per hour.	Direction.	Date.			
Atlantic City.....	30.18	30.57	26	29.38	23	8	31	s.	23	77	70	65
Asbury Park.....												
Cape May City.....	30.19	30.58	27	29.46	23	10	35	sw.	23			
Long Branch.....	30.14	30.53	6	29.28	23	17	60	nw.	24			
Newark.....						6	36	w.	24	*65	158	59
New York, N. Y.....	30.13	30.53	6	29.25	23	18	66	nw.	24	69	61	64
Palisades Park.....	30.12	30.54	6	29.25	23							
Philadelphia, Pa.....	30.16	30.57	26	29.29	23	10	42	sw.	23	71	62	54
Sandy Hook.....	30.13	30.55	7	29.18	23	17	57	sw.	23	76	67	57
Trenton.....	30.14	30.54	26	29.29	23	11	46	sw.	23	79	66	62

§ Two directions and dates

* 7 a. m. † 9 p. m.

Daily temperatures for November, 1916.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean			
The Highlands and Kittatinny Valley.																																			
Belvidere.....	Maximum...	62	67	59	51	49	51	.....	66	63	59	55	55	54	....	40	45	48	51	54	50	40	59	49	30	38	39	49	46	56	....	51.3°			
	Minimum...	47	36	36	28	41	.....	29	.....	32	42	32	26	....	34	27	24	25	29	25	30	24	18	20	25	26	20	21	31	39	39	....	29.9°		
Charlotteburg.....	Maximum...	60	61	53	52	42	56	56	61	65	61	50	48	49	53	38	37	40	44	51	46	42	37	44	45	38	33	51	46	56	....	49.0			
	Minimum...	47	41	37	24	39	36	21	29	31	40	31	20	41	34	25	24	19	20	24	38	19	12	24	30	24	12	19	20	31	46	....	28.9		
Dover.....	Maximum...	60	63	59	53	46	52	55	60	69	62	53	49	50	54	37	37	42	44	49	51	42	41	59	59	33	34	51	40	57	54	....	50.8		
	Minimum...	44	41	32	27	40	33	25	28	31	34	30	23	34	29	28	22	23	28	26	35	21	50	29	31	23	20	22	22	30	34	....	28.7		
Layton.....	Maximum...	59	65	54	54	45	49	55	59	66	64	55	47	51	51	39	38	40	45	49	50	43	45	39	55	35	35	45	57	54	55	....	50.1		
	Minimum...	47	33	32	26	40	38	27	28	31	40	32	22	39	33	24	24	20	25	19	27	22	13	23	34	25	12	24	21	31	44	....	28.5		
Newton.....	Maximum...	56	62	55	51	53	48	54	57	68	63	53	47	48	53	36	35	40	45	49	50	42	40	56	57	36	33	48	44	58	54	....	49.7		
	Minimum...	46	39	35	33	38	37	30	36	36	41	.....	27	39	32	23	23	23	28	25	32	21	18	30	32	23	19	23	26	40	41	....	30.9 ^a		
Phillipsburg.....	Maximum...	58	63	56	52	48	46	58	60	70	65	55	49	51	54	38	38	44	46	48	52	45	40	57	59	34	36	50	46	52	55	....	50.8		
	Minimum...	48	39	42	32	41	40	30	34	34	42	37	29	41	35	28	24	28	30	27	33	23	19	27	34	26	22	25	24	30	47	....	32.4		
Sussex.....	Maximum...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
	Minimum...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
The Red Sandstone Plain.																																			
Bergen Point.....	Maximum...	62	65	57	56	56	54	57	61	72	64	57	53	53	56	37	42	47	48	52	58	43	43	54	54	38	37	52	50	66	57	....	53.3		
	Minimum...	43	39	41	33	42	40	34	36	40	46	39	33	44	36	30	28	26	32	28	33	26	22	36	35	28	22	26	29	39	44	....	34.3		
Boonton§§.....	Maximum...	60	65	54	54	50	57	52	59	70	62	55	52	56	51	41	41	45	47	51	52	45	44	61	53	35	36	...	...	...	...	...	52.0°		
	Minimum...	50	36	36	26	35	36	26	26	31	42	32	21	31	44	28	26	20	28	20	26	22	19	20	34	27	12	19	20	28	28	...	28.3		
Elizabeth.....	Maximum...	64	66	59	56	53	56	60	62	73	67	60	54	52	46	40	30	26	25	28	26	30	26	18	30	42	24	21	22	26	33	49	...	54.5	
	Minimum...	49	37	37	29	44	37	29	32	37	45	37	30	46	40	30	26	25	42	46	50	53	55	47	45	58	59	30	39	53	48	53	55	...	53.4
Flemington.....	Maximum...	61	66	60	54	51	51	57	61	73	68	58	50	53	55	43	42	46	50	53	55	47	45	58	59	30	27	22	20	22	30	49	...	32.4	
	Minimum...	46	39	42	29	43	41	28	30	31	44	36	27	46	40	31	25	25	34	25	32	27	17	26	39	27	22	20	22	30	49	...	51.6		
Highwood.....	Maximum...	60	63	54	55	52	52	55	60	68	63	54	52	51	55	36	39	43	46	52	52	39	45	58	59	37	36	50	46	61	55	...	30.5		
	Minimum...	44	35	36	29	42	35	26	34	37	39	32	23	43	32	29	24	24	28	25	28	23	16	28	36	26	18	25	27	31	41	...	52.8		
Jersey City.....	Maximum...	62	63	57	55	55	55	57	60	70	59	57	54	56	54	44	42	47	47	51	54	45	45	54	58	46	36	52	50	56	56	...	37.7		
	Minimum...	54	44	46	39	43	41	37	41	41	47	44	36	45	38	32	28	34	37	31	35	27	26	39	39	30	25	30	34	42	47	...	53.5		
Lamhertville.....	Maximum...	63	64	59	56	55	50	56	59	71	67	57	54	56	54	44	42	47	47	51	54	45	45	54	58	46	36	52	50	56	56	...	36.2		
	Minimum...	52	40	46	34	42	42	32	34	39	49	41	32	48	43	32	27	29	37	31	33	30	23	34	46	28	24	25	28	34	50	...	51.9		
Little Falls.....	Maximum...	62	63	55	55	52	54	55	57	68	60	55	53	54	57	43	39	46	47	49	51	43	42	58	56	36	35	51	50	57	55	...	31.5		
	Minimum...	42	43	35	33	41	34	35	32	38	35	32	27	45	33	31	26	26	28	28	31	23	20	28	34	27	19	23	26	33	38	...	51.6		
Newark.....	Maximum...	59	62	54	54	54	53	56	60	70	60	55	53	55	55	35	38	45	44	50	53	43	43	60	52	34	35	52	47	62	54	...	36.2		
	Minimum...	46	43	43	41	43	39	36	40	43	46	42	35	45	32	30	28	30	37	30	38	27	26	36	34	27	25	30	33	41	39	...	...		
New Brunswick.....	Maximum...	58	64	56	54	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
	Minimum...	48	39	43	31	43	37	30	35	40	38	36	33	47	40	30	25	27	33	28	34	27	19	29	40	27	21	25	27	34	49	...	33.8		
Palisades Park.....	Maximum...	60	63	53	54	53	54	56	60	70	61	55	52	51	54	34	39	44	47	52	53	41	44	60	52	36	36	51	47	61	55	...	51.6		
	Minimum...	37	37	31	31	41	33	28	35	43	39	28	26	44	32	29	23	24	28	27	28	19	18	32	32	26	19	25	31	32	36	...	30.5		
Paterson.....	Maximum...	63	67	58	57	53	56	59	62	71	64	59	53	53	60	43	41	45	49	54	56	45	44	57	55	41	38	52	48	55	54	...	53.7		
	Minimum...	44	41	42	36	39	37	32	37	38	46	41	31	45	39	30	28	28	35	29	33	26	43	59	59	37	37	52	48	61	55	...	34.8		
Plainfield.....	Maximum...	62	64	58	54	53	54	58	61	72	63	59	54	52	56	41	42	47	48	52	56	45	44	59	59	37	37	52	48	61	55	...	53.4		
	Minimum...	45	37	37	29	43	38	28	31	37	45	36	33	47	36	30	26	25	36	27	32	24	41	60	56	41	38	54	47	56	56	...	32.6		
Somerville.....	Maximum...	59	65	59	54	51	56	58	63	72	65	57	51	53	56	42	39	46	47	53	54	47	44	60	56	41	38	54	47	56	56	...	53.3		
	Minimum...	45	29	31	25	41	35	26	34	36	34	31	23	46	37	28	24	21	33	22	23	23	12	23	30	26	17	17	18	29	40	...	28.6		
South Orange.....	Maximum...	58	61	53	53	46	50	53	58	66	64	53	52	52	56	38	38	45	44	49	52	41	42	60	36	35	49	46	61	56	...	50.9			
	Minimum...	46	38	39	33	42	38	33	37	40	44	39	34	46	32	30	27	27	34	29	33</														



Scale of Shades.

- 0 to 2 inches.
- 2 to 4 inches.
- 4 to 6 inches.
- 6 to 8 inches.
- Over 8 inches.

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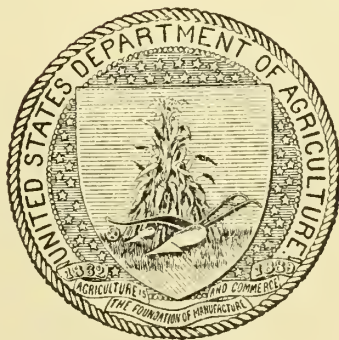
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CLIMATOLOGICAL DATA

NEW JERSEY SECTION

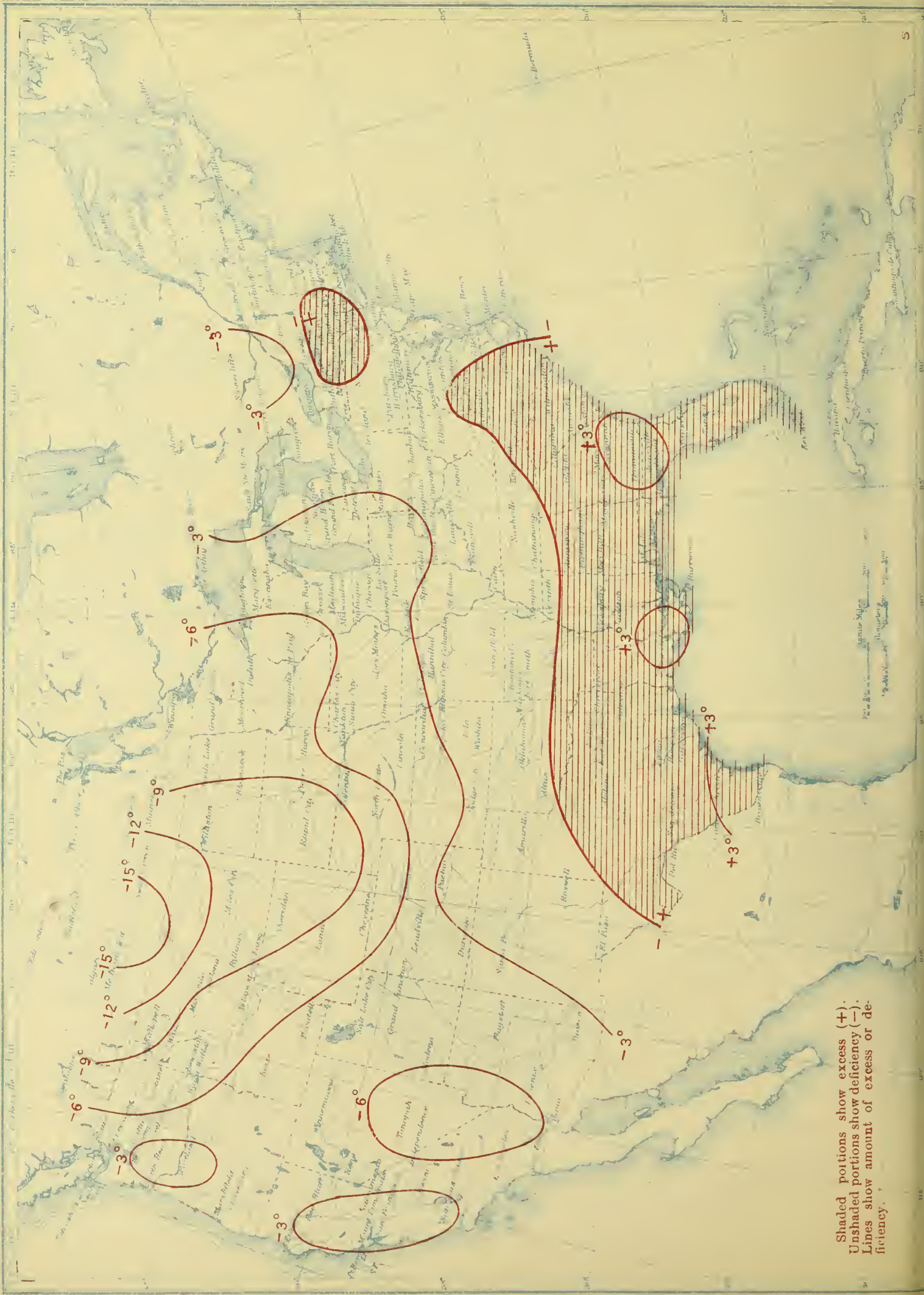
DECEMBER, 1916.

BY
G. HAROLD NOYES
METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
JANUARY 17, 1917.

Departure of the Mean Temperature from the Normal, December, 1916.



Shaded portions show excess (+).
Unshaded portions show deficiency (-).
Lines show amount of excess or deficiency.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

VOL. XXIX. TRENTON, N. J., DECEMBER, 1916. No. 12.

GENERAL SUMMARY.

The first decade of December was somewhat warmer than normal, thus continuing the general impression of mild weather that had prevailed throughout the Autumn. This was followed by a pronounced change to typical winter weather in nearly all, except the more southern, portions of the State for the remainder of the month. With the commencement of the second decade, temperatures averaged mostly continuously below freezing, and a heavy snow storm occurred on the 15th, with resulting sleighing for nearly a week. Ponds and streams were closed with ice, and the Delaware was frozen to tide-water. A warm wave with rain opened the streams from the 22d to 28th, but ponds remained frozen at the close of the month. The intensity of the conditions were of course milder in southern counties and in the immediate proximity to the sea coast. Stormy weather occurred with frequent regularity; and for approximately a third of the month there were hard blows along the shore, being mostly from the northwest. Early in the third decade, low pressure along the Atlantic seaboard developed into a hard storm on the 22d, with barometer readings just under 29 inches, attended by thunder and lightning and heavy rain, in most instances exceeding an inch. Thunderstorms in December in New Jersey are remarkably unusual, there having been not more than four or five occurrences in something like 50 years.

While averages of temperature and precipitation were near normal, the depth of snowfall was twice as great as usually occurs in December. The principal dates of precipitation were the 4th, 5th, 9th, 11th, 12th 15th, 18th-19th in southern, and coast counties, 21st, 22d, 27th, and 28th.

The mean stage of the Delaware River at Phillipsburg was 2.8 feet. At Trenton the mean stage was 2.6 feet, which was 0.2 foot above normal. The highest stage was 5.9 feet on the 23d, and the lowest 1.0 foot on the 1st and 2d.

Storm warnings were displayed at coast stations on the 6th, 9th, 12th, 15th, 18th, and 22d.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 36 stations, was 32.3°, which was 0.7° below normal. A cold zone reached southward from the highlands to the center of the State, and nearly to the coast, between the Delaware and the shore, with an average of freezing or lower. The highest temperature for the month was 70° at Indian Mills on the 5th, and the lowest, 8° below zero at Layton on the 18th. The greatest daily range of temperature was 37° at Clayton on the 20th. Only in the northern half of the State were there scattered instances of temperatures averaging above normal.

PRECIPITATION.

The average total precipitation of the State, as deduced from observations of 40 stations, was 4.61 inches, which was 0.75 inch above normal. The average depth of total snowfall, (unmelted), from observations of 36 stations, was 12.6 inches,

which was 6.3 inches greater than normal. The snowfall was least along the southeastern coast, and fairly uniform in other districts. There were but few localities where the precipitation was subnormal. The greatest monthly amount was 6.34 inches at Tuckerton, and the least, 3.35 inches at Newton. The greatest snowfall was 21.0 inches at Pompton Plains, and the least, 5.5 inches at Woodbine. The greatest amount of precipitation in 24 consecutive hours was 2.00 inches at Bridgeton on the 22d. The average number of days throughout the State, on which 0.01 inch precipitation, or more, fell, was 11, which was 2 more than normal.

WIND.

The prevailing wind direction for the month was from the northwest, with an approximate movement of 14 miles per hour. The highest velocity, sustained for five consecutive minutes, was 86 miles per hour from the northwest, at Long Branch, on the 22d. The winds were also high on the 6th and 16th, generally, as well as on other dates along the coast.

SUNSHINE AND CLOUDINESS.

The average number of clear days throughout the State was 13, which was 1 more than normal; partly cloudy, 8, which was 1 less than normal; cloudy, 10, which was normal. The average percent. of possible sunshine approximated 56, which was slightly greater than normal.

MISCELLANEOUS.

Atmospheric pressure, reduced to sea level, was 30.01 inches, which was 0.09 inch below normal; highest readings occurred on the 26th, and lowest, on the 22d. The dates of sleet were the 11th, 12th, 20th, 21st, and 27th. Dense fog occurred on the 21st, 22d, 27th, and 28th, and on the 11th and 12th at Cape May. Thunderstorm on the 22d. Lunar halos were observed on the 4th and 10th; solar halos, on the 1st, 3d, 4th, 18th, 20th, and 30th.

COMPARATIVE DATA FOR DECEMBER.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more prec.
1885.....	35.3	60	6	3.15	4.33	2.47	.....	.....	.....	.....
1886.....	29.1	60	-2	3.51	4.65	1.62	.....	.....	.....	.....
1887.....	33.7	62	6	5.29	7.32	3.64	.....	.....	12	10
1888.....	34.9	65	5	3.69	4.95	2.05	.....	.....	8	8
1889.....	41.5	71	8	1.62	3.69	0.25	.....	.....	9	9
1890.....	30.9	56	3	3.89	5.74	2.34	11	10	10	8
1891.....	40.9	71	9	4.25	5.32	2.25	13	9	9	8
1892.....	30.4	68	1	1.87	3.09	1.30	9	11	11	6
1893.....	34.9	70	5	3.39	4.66	1.67	11	10	10	11
1894.....	34.8	66	-3	4.36	6.39	1.64	12	9	10	9
1895.....	37.2	70	3	2.61	5.42	1.71	11	9	11	6
1896.....	31.3	64	-15	1.43	2.70	0.85	14	9	8	4
1897.....	35.1	69	-3	4.90	6.44	3.07	8	11	12	11
1898.....	33.3	66	-2	3.53	4.85	2.38	12	10	9	9
1899.....	35.5	69	-1	2.11	4.30	1.29	14	10	7	7
1900.....	34.4	64	-2	2.59	3.97	1.47	14	10	7	6
1901.....	32.6	68	-8	7.30	9.45	4.87	12	9	10	11
1902.....	31.7	62	-11	7.23	8.99	5.81	13	7	11	13
1903.....	28.6	56	-13	4.08	5.49	3.20	14	9	8	9
1904.....	27.0	60	-15	3.19	5.38	2.06	10	7	14	12
1905.....	36.3	61	5	3.65	5.60	2.58	14	8	9	7
1906.....	33.0	70	-5	3.99	6.18	2.70	9	8	14	13
1907.....	36.6	70	-3	4.91	7.13	3.55	12	8	11	9
1908.....	34.0	72	1	3.63	5.26	2.10	10	8	13	11
1909.....	29.8	60	-15	4.45	5.51	3.55	14	8	9	5
1910.....	26.5	58	-14	2.79	4.60	1.92	11	10	10	5
1911.....	38.4	70	2	3.77	5.09	2.94	10	7	14	11
1912.....	36.9	68	-1	4.73	6.33	3.40	12	9	10	9
1913.....	37.7	63	-11	3.03	4.59	1.47	13	9	9	7
1914.....	31.1	66	-12	5.33	9.12	2.99	10	6	15	12
1915.....	31.9	64	3	4.82	7.83	2.19	12	9	10	8
1916.....	32.3	70	-8	4.61	6.34	3.35	13	8	10	11

Climatological data for December, 1916.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.							Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation .01 in. or more.	Clear.	Pt. cloudy.	Cloudy.		
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	25	30.9 ^b	+0.1	63	5	4	18	26	4.62	+0.48	1.60	11.0	8	18	5	8		Samuel J. Hixson. George S. Briggs. Brice E. Riker. William C. Harris. A. M. Deputie.
Charlotteburg.....	Passaic.....	719	24	28.8	-1.8	57	5†	6	17	25	4.61	+0.22	.....	13.0	10	11	17	3	nw.	
Culvers Lake†.....	Sussex.....	848	15	.....	.....	.....	.....	.....	20	.....	3.46	-0.07	1.32	17.1	10	17	7	7	w.	
Dover.....	Morris.....	600	32	29.0	-1.1	60	5	7	18	20	5.26	+1.14	1.40	18.5	9	11	11	9	.....	
Layton.....	Sussex.....	480	16	28.2	+0.8	66	5	-8	18	30	3.55	-0.62	1.35	12.5	9	16	5	10	nw.	
Newton.....	Sussex.....	769	35	28.2	-1.1	58	5	6	17	32	3.35	-0.35	1.33	16.2	11	16	4	11	nw.	Irving G. Kern. D. Wilson Smith. George Dymock.
Phillipsburg.....	Warren.....	363	34	31.1	-0.2	64	5	10	17†	21	4.36	+0.68	1.72	12.6	12	15	6	10	nw.	
Sussex.....	Sussex.....	442	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Means and extremes...				29.4	-0.6	66	5	-8	18	32	4.17	+0.21	1.72	14.4	10	15	8	8	w.	
<i>The Red Sandstone Plain.</i>																				
Bergen Point††.....	Hudson.....	37	19	32.8 ^a	-0.2	65	5	10	18	22	4.28	+0.29	1.30	9.5	8	3	18	10	nw.	William H. Mitchell. J. W. Demmers. Miss M. A. Butler. L. B. Bonnett. Hiram E. Deats.
Boonton.....	Morris.....	400	26	.....	.....	59	5	2	18	33	3.69	-0.41	1.12	11.9	14	19	2	10	sw.	
Chatham.....	Morris.....	330	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Elizabeth.....	Union.....	45	37	32.2	-1.3	64	5	1	18	29	4.95	+1.16	1.22	15.5	11	14	10	7	nw.	
Flemington.....	Hunterdon.....	140	28	31.8	-0.2	66	5	6	18	26	5.24	+1.56	1.52	12.0	10	15	7	9	w.	
Highwood.....	Bergen.....	90	27	30.8	-1.6	61	5	1	18	28	3.42	-0.74		14.4	8	10	13	8	nw.	Charles J. Bates. S. K. Pearson, Jr. Samuel W. Cochran. Montclair Water Co. Prof. William Wiener.
Jersey City.....	Hudson.....	10	17	34.2	+0.2	61	5	15	17†	20	4.19	+0.63	1.00	13.4	13	12	9	10	nw.	
Lambertville.....	Hunterdon.....	80	29	33.6	+0.3	64	5	12	18	19	5.00	+1.22	1.32	.....	10	11	15	5	nw.	
Little Falls.....	Passaic.....	180	13	31.9	.....	61	5	9	18	22	3.57	-0.27	0.78	.....	10	17	6	8	w.	
Newark.....	Essex.....	159	74	33.4	+0.4	63	5	15	20	18	5.12	+1.32	1.23	18.0	13	16	2	13	nw.	
New Brunswick.....	Middlesex.....	110	63	32.4 ^a	-0.7	64	5	10	16†	24	5.24	+1.49	1.22	14.0	11	10	11	10	w.	N. J. Experiment Station. George P. Kirsten. Marion T. Probert. John Neagle. M. S. Taylor
Palisades Park.....	Bergen.....	80	1	31.1	.....	63	5	6	18	25	4.12	.....	1.10	15.2	10	15	6	10	nw.	
Paterson.....	Passaic.....	80	45	33.5	+0.4	60	5	13	18†	23	4.31	+0.20	1.34	.....	8	.....	.....	.....	nw.	
Plainfield.....	Union.....	100	30	32.2	+0.3	65	5	4	18	27	4.66	+0.77	1.20	12.8	12	14	9	8	nw.	
Pompton Plains.....	Morris.....	195	14	.....	.....	.....	.....	.....	.....	.....	5.98	+2.24	1.38	21.0	14	.....	.....	.....	nw.	
Somerville.....	Somerset.....	60	34	30.5	-1.4	66	5	-2	18	30	4.57	+1.00	1.24	10.0	11	10	10	11	nw.	A. A. Macdonald. Dr. W. J. Chandler. U. S. Weather Bureau.
South Orange.....	Essex.....	200	46	31.9	-0.1	61	5	11	20	21	4.50	+0.67	1.25	13.5	11	11	10	10	w.	
New York, N. Y.....	Essex.....	365	46	33.8	-0.6	62	5	15	16	21	3.97	+0.52	0.81	13.7	12	9	12	10	nw.	
Means and extremes...				32.3	-0.3	66	5	-2	18	33	4.55	+0.74	1.52	13.9	11	13	9	9	nw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	35	34.0	-1.6	66	5	4	18	35	4.55	+0.68	2.00	14.0	11	15	6	10	w.	Henry A. Jorden. D. S. B. McCoy. George L. Wilson. Frederick H. Hoefler. G. Franklin Elridge.
Burlington.....	Burlington.....	12	30	32.6	-1.5	65	5	12	18	23	5.33	+1.42	1.61	11.0	12	18	3	10	nw.	
Clayton.....	Gloucester.....	126	24	33.0	-1.0	68	5	3	18	37	4.89	+1.20	.....	12.5	10	15	9	7	nw.	
Hammonton.....	Atlantic.....	103	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Hightstown.....	Mercer.....	140	24	31.8 ^a	-1.8	65	5	9	17	24	4.02	+0.31	0.85	.....	10	.....	.....	.....	.....	
Imlaystown.....	Monmouth.....	185	28																	H. E. Bullock. James M. Armstrong. R. W. Holman. Geo. L. Gillingham. William L. Flick.
Indian Mills.....	Burlington.....	76	27	32.6	-1.4	70	5	-1	18	36	5.90	+1.81	1.82	13.0	12	10	12	9	nw.	
Lakewood.....	Ocean.....	54	13	32.0	-1.8	67	5	-2	18	30	4.79	+1.07	1.60	10.5	11	11	6	14	nw.	
Moorestown.....	Burlington.....	75	54	33.5	+0.2	67	5	11	18	28	4.96	+1.38	1.72	14.5	11	14	10	7	nw.	
Northfield.....	Atlantic.....	25	9	.....	.....	.....	.....	.....	.....	.....	5.08	.....	1.00	9.6	11	.....	.....	.....	.....	
Pleasantville.....	Atlantic.....	26	18								3.62	-0.05	0.60		13	18	6	7		Lincoln Van Gilder. U. S. Weather Bureau. Frank R. Austin. E. V. C. Hendricks. Baron de Hirsch Agr. Sch.
Trenton.....	Mercer.....	190	45	32.2	-2.2	64	5	12	16	22	4.87	+1.71	1.20	10.7	14	10	9	12	w.	
Tuckerton.....	Ocean.....	23	23	33.6	-0.9	67	5	2	18	33	6.34	+2.06	1.30	11.2	11	14	8	9	nw.	
Vineland†.....	Cumberland.....	87	48	33.4	-1.0	67	5	2	18	34	4.50	+0.66	0.92	6.5	10	11	6	14	w.	
Woodbine.....	Cape May.....	43	25	35.0 ^b	0.0	62	4	5	18†	28	.....	.....	.....	5.5	.....	.....	.....	.....	.....	
Philadelphia, Pa.....		117	46	35.7	0.0	64	5	16	16	21	5.45	+2.41	1.76	9.2	12	11	8	12	nw.	U. S. Weather Bureau.
Means and extremes...				33.1	-1.2	70	5	-2	18	37	4.90	+1.11	2.00	10.8	11	14	7	10	nw.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	27	32.9	-1.6	67	5	11	20	25	4.13	+0.49	1.52	10.0	10	17	4	10	w.	Wilbur H. Pancoast. U. S. Weather Bureau. U. S. Weather Bureau. William D. Martin, Jr. U. S. Weather Bureau.
Atlantic City.....	Atlantic.....	16	43	35.3	-1.1	60	5	14	16	26	4.84	+1.10	1.21	8.1	13	12	4	15	nw.	
Cape May City.....	Cape May.....	17	32	36.6	-1.4	61	5	16	16	22	4.16	+0.38	0.81	8.4	11	11	13	7	nw.	
Long Branch.....	Monmouth.....	25	9	32.9	.....	67	5	11	19†	23	5.69	.....	1.51	11.7	11	15	6	10	nw.	
Sandy Hook.....	Monmouth.....	22	18	34.3	-0.3	60	5	17	16	18	4.67	+0.82	1.01	13.7	12	13	8	10	nw.	
Means and extremes...				34.4	-1.1	67	5	11	19†	26	4.70	+0.70	1.52	10.4	11	14	7	10	nw.	
For the State.....				32.3	-0.7	70	5	-8	18	37	4.61	+0.75	2.00	12.6	11	13	8	10	nw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

* Received too late to be included in the means.

Reference letters, a, b, °, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Vineland is South Vineland.

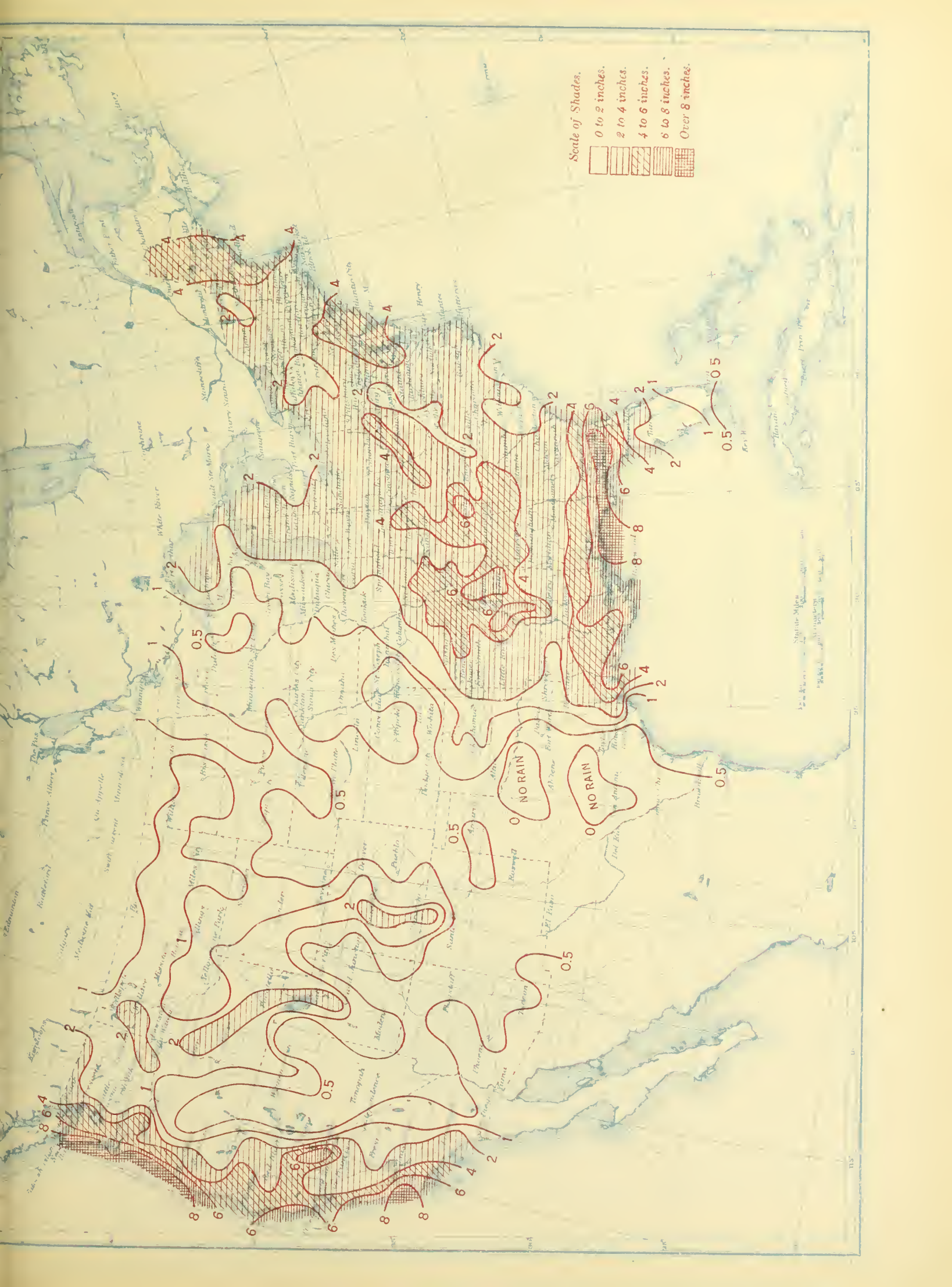
Daily precipitation for December, 1916.																																	
Stations.	Day of month.																																Total.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>The Highlands and Kittatinny Valley.</i>																																	
Belvidere.....					.09					.43			.60		.80					.18			10	1.60				*	1.00			4.62	
Charlotteburg.....					.07					.70		*	.49		.77						.18		*	1.07				*	1.33			4.61	
Culvers Lake.....				.02	.01					.56	T.	.36		.42	.03	T.							.12	1.32				.30	.32	T.		3.46	
Dover.....					.08					.75	*	.65			1.40								.15	1.39				*	.84			5.26	
Layton.....				.06	.07					.45	T.	.45			.50		T.						.13	1.35				.39	.15			3.55	
Newton.....				.14	.02					.31		.05	.40		.30	.01	T.						.18	1.33				.28	.33			3.35	
Phillipsburg.....				.03	.01					.41		.07	.59		.01	.30	T.				.05		.28	1.72				.41	.48			4.36	
Sussex.....																																	
<i>The Red Sandstone Plain.</i>																																	
Bergen Point.....										.55		.18	.75		T.	.40	T.				T.		.42	1.30				.33	.35			4.28	
Boonton.....	.03			.02	.01					.90		.30	.15	T.	.06	.33							.23	.11	1.01				.22	.20	.12		3.69
Chatham ||.....																																	
Elizabeth I.....			.03	.02	T.					.67		*	.78	.02		.95					T.		.44	1.22					*	.82			4.95
Flemington.....				.03	.03					.68		.08	.78		T.	.80					T.		.43	1.52			T.	.15	.74			5.24	
Highwood.....	T.			T.						.58		.11	.48		T.	.59					T.		.15	.74			T.	*	.77			3.42	
Jersey City**.....		.01	T.	.01						.54		*	.59	.04		.79	T.		.02	T.	*		.38	1.00			T.	*	.81			4.19	
Lambertville.....				.05						.58		T.	.91	.03		.61				.05			.40	1.32				.24	.81			5.00	
Little Falls**.....			.05	.05						.66		.10	.50	T.		.78					T.		.28	.57				.36	.22			3.57	
Newark**.....			.01	.01	.02					.57		.18	.72	.03		1.10		T.				.09	.34	1.23				.45	.37			5.12	
New Brunswick.....					T.					.52		.20	.67		.10	.90	.20		.05				.57	1.22				.31	.50			5.24	
Palisades Park.....				.03						.67		*	.70		.02	.50				T.			.33	1.10				.17	.60			4.12	
Paterson.....				T.						.51		.11	.47		T.	1.10							.14	1.34				.22	.42			4.31	
Plainfield**.....			T.	.01	.01					.59		.20	.31	.03		1.20						.05	.27	.99				.22	.78			4.66	
Pompton Plains ||.....	.41				.02	.03				.85		.24	.45		.16	1.38						.29	.19	1.12		T.		.04	.48	.32		5.98	
Somerville.....					.08					.71		.14	.69		.04	.46	.02			T.			.32	1.24				.33	.54			4.57	
South Orange.....				.02	.01					.70		.10	.64		.05	.60	T.						.44	1.25				.17	.52			4.50	
New York, N. Y.***.....			T.	.01	.02					.54		.16	.57	.03		.56	T.		T.	T.	.04		.37	.81				.29	.57			3.97	
<i>The Southern Interior.</i>																																	
Bridgeton.....				.05	.05							.38	.52	.15		.25			.30				.15	2.00		T.			.20	.50		4.55	
Burlington.....				.05	.03					.45		.20	.68	.04		.50	T.		.25				.64	1.61				.35	.53			5.33	
Clayton.....										.38		.02	.52			.47			.22	.21		*	2.60					.16	.31			4.89	
Hammononton.....																																	
Hightstown.....				*						.45		.20	.73			.85			*			.58	.61					.12	.48			4.02	
Imlaystown.....																																	
Indian Mills.....			.03	.02						.40		.21	.81		.06	.61		T.	.48				.84	1.82				.27	.35			5.90	
Lakewood.....			.05	T.						.39		.18	.75		.07	.70	T.		.24				.07	1.60				.31	.43			4.79	
Moorestown.....										.39		.16	.70		.05	.29	.02		.29				.69	1.72				.26	.39			4.96	
Northfield.....				.01	.04					.41		.56	.78		T.	.48		.18					.94	1.00				.14	.54			5.08	
Pleasantville.....				T.	.04					.20		.21	.55	*	.03	.43			.02	.60			.13	1.21			T.	.13	.07			3.62	
Trenton***.....			T.	.01	.01					.45		.22	.60	.01		.70			.16	.02	.08		.46	1.20				.31	.64	T.		4.87	
Tuckerton.....				.02	.05					.47		.30	1.30			.94				.31			.87	1.28				.17	.63			6.34	
Vineland.....				.01						.36		.28	.83		T.	.31				.22	T.		.91	.92			T.	.16	.50			4.50	
Woodbine.....					.05					.50		.54	.80		T.	.50	T.					.90	§		*			§	§			§	
Philadelphia, Pa.***.....				T.		T.				.46		.27	.65	.07		.57			.41	.01	.09	.54	1.76					.30	.32			5.45	
<i>The Sea Coast.</i>																																	
Asbury Park**.....					T.					.16		.18	.62	.05		.65			.10	.12	T.	T.	1.52					.28	.45			4.13	
Atlantic City***.....			T.	T.	.02					.38		.49	.80	.01		.56			.25	.08	.01	.84	.74			T.		.12	.54			4.84	
Cape May City***.....										.24		.49	.84	T.		.58			.12	.20	.05	.30	.81			T.		.12	.41			4.10	
Long Branch**.....										.76		.24	.54	.07		.69			.16	.14	T.	.58	1.51					.44	.56			5.69	
Sandy Hook***.....				T.		T.				.36		.20	.55	.02		1.00			.19	.12	.05	.41	1.01					.31	.45			4.67	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded.
|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.
* Precipitation included in the next following measurement. **Precipitation for 24-hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

Miscellaneous Data.												
Stations.	Pressure.					Wind.			Moisture.		Sun- shine.	
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, per cent. at 8 a. m.		Relative humidity, per cent. at 8 p. m.
							Miles per hour.	Direction.	Date.			
Atlantic City.....	30.04	30.53	26	29.22	22	9	30	w.	22	77	72	59
Cape May City.....	30.05	30.52	26	29.34	22	11	35	nw.	16	75	70	58
Long Branch.....	30.00	30.51	26	28.97	22	18	86	nw.	22	70	68	58
Newark.....						7	48	nw.	22	*59	*60	52
New York, N. Y.....	29.98	30.52	26	29.02	22	21	88	nw.	22	71	59	56
Palisades Park.....	29.95	30.48	26	29.00	22							
Philadelphia, Pa.....	30.04	30.58	26	29.16	22	11	48	nw.	22	69	64	52
Sandy Hook.....	30.01	30.53	26	29.00	22	19	65	nw.	22	75	70	59
Trenton.....	30.00	30.52	26	29.05	22	12	54	nw.	22	76	65	58

Daily temperatures for December, 1916.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean		
The Highlands and Kittatinny Valley.																																		
Belvidere.....	Maximum...	50	48	58	63	51	53	50	49	41	38	35	34	....	27	27	28	30	31	37	39	33	32	39	36	33	38	32	..	31	39.4 ^a			
	Minimum...	33	30	22	38	43	38	35	33	32	25	21	30	22	15	15	12	6	4	10	9	21	31	20	16	21	31	22	13	14	22.4			
Charlotteburg.....	Maximum...	42	42	40	53	57	57	47	38	45	37	38	35	32	26	24	22	24	25	24	29	39	38	38	30	37	26	31	43	32	24	25	35.5	
	Minimum...	32	33	25	33	32	37	33	32	25	25	19	28	22	17	15	14	6	9	17	9	23	29	19	20	23	19	18	27	20	11	14	22.1	
Dover.....	Maximum...	43	47	42	55	60	53	49	40	46	37	33	35	30	28	25	22	25	27	24	29	40	34	30	30	37	30	34	41	29	24	27	25.7	
	Minimum...	33	37	24	35	43	38	34	29	28	26	20	26	19	16	17	11	9	7	14	10	25	24	20	15	22	19	21	29	14	11	14	22.3	
Layton.....	Maximum...	46	46	43	52	66	57	49	51	45	41	32	35	33	31	22	22	26	22	25	27	39	39	33	33	37	32	33	38	35	25	28	36.9	
	Minimum...	33	30	22	34	41	37	83	30	27	23	18	30	12	10	12	14	1	-8	15	-1	23	23	20	12	23	15	12	32	19	2	12	19.5	
Newton.....	Maximum...	44	44	40	54	58	56	50	45	46	38	33	33	31	27	23	20	25	27	26	28	37	36	29	28	33	30	32	38	34	23	27	35.3	
	Minimum...	33	31	26	33	45	24	32	33	30	23	21	28	21	12	11	8	6	9	16	7	16	22	18	20	20	18	11	31	20	12	13	21.0	
Phillipsburg.....	Maximum...	48	47	43	57	64	59	49	51	47	38	36	35	33	29	26	23	26	27	24	31	36	38	34	32	38	34	33	39	30	26	28	37.5	
	Minimum...	34	33	26	37	45	38	36	40	34	25	23	30	24	18	17	11	10	10	19	10	27	29	20	19	24	20	22	30	23	15	16	24.7	
Sussex.....	Maximum...	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	
	Minimum...	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	
The Red Sandstone Plain.																																		
Bergen Point.....	Maximum...	46	50	47	59	65	56	51	44	50	41	39	39	35	33	29	28	30	36	33	40	41	35	34	....	35	36	40	34	28	30	39.9 ^b		
	Minimum...	35	21	25	40	49	40	35	30	34	27	24	31	27	22	20	13	14	10	19	11	28	30	22	20	26	22	23	30	24	16	16	25.6	
Boonton§§.....	Maximum...	47	48	45	58	59	51	51	44	48	41	38	36	34	31	21	25	28	30	30	34	41	45	33	35	42	33	40	28	22	29	38.1		
	Minimum...	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	
Elizabeth.....	Maximum...	49	50	49	60	64	58	53	47	50	47	37	36	35	32	27	25	29	30	29	33	41	40	36	34	....	36	40	23	23	14	15	17.3 ^b	
	Minimum...	33	31	23	39	44	40	34	35	32	27	22	33	26	18	19	14	12	1	18	9	25	32	22	17	27	19	24	33	23	15	14	24.5	
Flemington.....	Maximum...	49	50	47	60	66	61	55	47	49	41	35	35	34	3	27	24	30	29	28	30	40	38	35	35	39	37	32	38	37	28	33	39.4	
	Minimum...	34	33	23	38	40	39	32	39	31	27	21	31	25	17	16	11	11	6	20	10	23	29	22	18	24	20	24	32	24	16	16	24.3	
Highwood.....	Maximum...	45	49	44	58	61	52	50	42	48	41	35	35	34	32	26	23	27	28	28	31	39	41	33	32	39	32	38	34	29	29	37.7		
	Minimum...	32	31	25	38	48	40	35	30	27	21	32	22	21	21	16	11	11	1	17	6	24	27	23	20	26	15	22	32	20	15	14	23.9	
Jersey City.....	Maximum...	48	49	44	57	61	58	51	47	49	41	38	40	35	32	30	25	28	30	30	35	39	43	35	35	40	33	36	40	30	31	39.6		
	Minimum...	35	35	33	42	48	41	37	39	42	30	29	38	28	23	16	15	16	12	22	15	32	35	25	24	30	24	36	25	19	20	28.9		
Lambertville.....	Maximum...	52	47	46	57	64	59	51	51	49	41	38	36	36	33	31	28	28	31	30	34	38	39	36	35	40	34	36	40	40	30	29	40.0	
	Minimum...	38	36	27	41	47	40	37	43	36	28	26	34	24	21	19	13	15	12	21	12	32	44	42	34	40	34	36	42	31	27	28	39.2	
Little Falls.....	Maximum...	47	49	46	58	61	57	52	43	48	40	36	31	35	31	27	25	28	31	27	32	43	46	35	34	46	34	36	42	31	27	28	39.2	
	Minimum...	31	32	26	39	44	35	36	31	31	28	22	31	24	21	21	15	15	9	10	10	28	29	22	20	25	21	24	30	19	15	17	24.6	
Newark.....	Maximum...	45	47	45	58	63	55	51	43	4	40	39	37	34	32	27	24	28	32	29	33	44	42	34	34	25	25	31	22	18	19	27.9		
	Minimum...	37	34	33	41	49	41	38	37	33	30	31	27	32	22	22	16	17	18	15	30	34	38	39	36	35	40	34	37	41	31	27	38.8	
New Brunswick.....	Maximum...	50	48	43	61	64	59	51	45	51	50	38	35	34	35	28	25	24	26	26	34	39	39	35	33	38	37	....	30	29	39.4 ^a			
	Minimum...	33	36	27	38	48	38	35	38	34	27	23	32	21	18	18	10	12	11	18	10	27	29	21	....	30	20	24	32	24	15	16	25.5 ^a	
Palisades Park.....	Maximum...	47	49	45	56	63	48	54	43	48	41	35	34	35	26	25	26	31	26	30	34	38	39	36	35	40	34	37	41	31	27	28	38.5	
	Minimum...	32	33	26	39	48	38	31	30	30	26	23	32	20	20	20	13	11	6	11	9	26	28	23	19	22	19	22	30	19	17	14	23.7	
Paterson.....	Maximum...	49	49	45	58	60	57	52	45	48	45	40	37	36	33	28	29	29	32	30	32	42	41	33	33	41	34	35	40	39	39	30	40.0	
	Minimum...	36	34	30	39	45	40	37	37	35	28	26	37	26	22	22	17	14	13	21	13	28	33	23	22	28	22	23	33	24	16	18	27.0	
Plainfield.....	Maximum...	47	50	47	60	65	55	53	44	50	40	37	38	34	32	27	23	28	31	31	34	42	41	33	34	41	36	34	39	34	30	31	39.4	
	Minimum...	34	31	24	38	43	40	30	30	34	27	21	34	27	20	19	13	13	1	10	8	29	30	22	18	26	22	24	34	22	17	17	25.1	
Somerville.....	Maximum...	47	49	47	59	66	61	52	46	48	41	33	35	34	32	28	24	27	28	27	34	43	39	32	35	35	39	34	32	38	37	28	29	39.1
	Minimum...	31	32	18	35	40	38	34	28	24	18	18	30	23	10	14	11	12	-2	18	7	32	42	41	32	32	35	41	31	27	28	29	31.1	
South Orange.....	Maximum...	45	47	44	59	61	52	45	41	40	40	37	30	30	27	23	20	15	15	12	15	29	28	23	20	25	22	25	31	22	16	17	26.1	
	Minimum...	36	35	28	38	46	40	37	37	37	28	27	31	27	20	20	15	12	10	11	29	28	23	20										



Scale of Shades.



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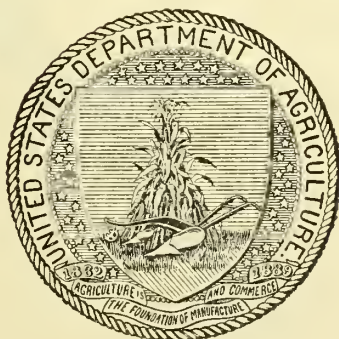
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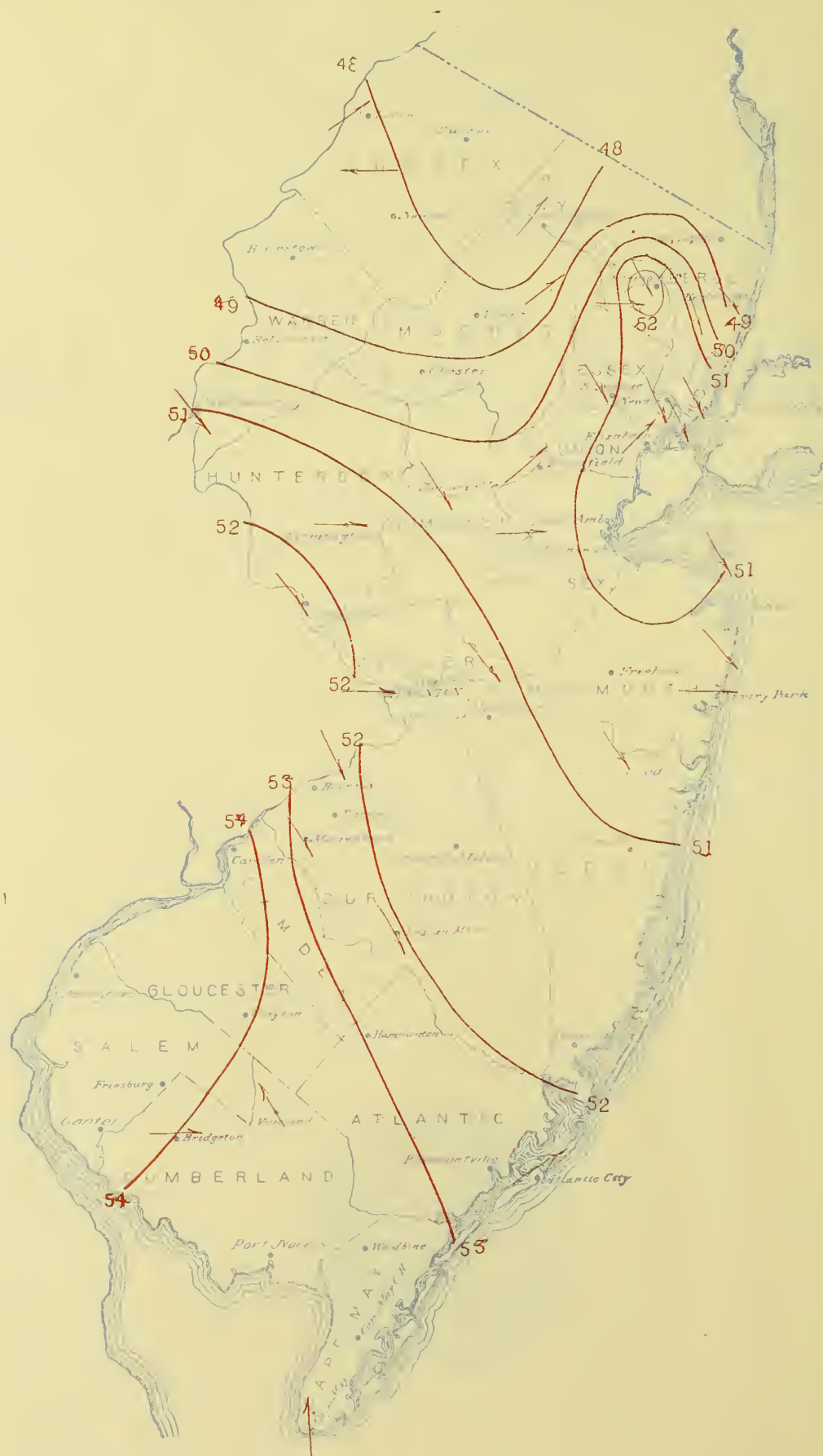
ANNUAL SUMMARY, 1916.

BY
G. HAROLD NOYES
METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
MARCH 3, 1917.

ANNUAL MEAN ISOTHERMS AND PREVAILING WIND DIRECTION 1916.



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Section Director.

TRENTON, N. J.

Vol. XXI.

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GENERAL SUMMARY.

It is a matter of convenience to compile and discuss climatological data for the calendar year as well as for shorter periods of time, but in the continental temperate zone the year is a not altogether satisfactory basis owing to the fact that a pronounced trend in some particular feature may produce some notable result, while a later change may negative or cancel the first result. In this manner, a year that appears to have had normal weather may, in fact, have had wide extremes and unfavorable results, or the reverse. The term "normal" as applied to weather for a year, has little significance in this region because of the justifiable elasticity that must be allowed to the term. Any day, week, month, or year that does not have extreme weather conditions, or an accumulation thereof, may be justly termed normal. But some few storms that may have fortuitously occurred at psychological moments, or at critical periods in various realms of human endeavor, are certain to produce lasting impressions of abnormality. The coldest year in New Jersey, since records were accurately compiled, was 1904, when the temperature averaged but 2° below normal, and it was further remarkable in that every month except May was subnormal in warmth. The year 1913 was the warmest on record, being nearly 3° above normal.

The year 1916 averaged one of the four driest since 1885. The variation of temperature from normal was immaterial, although a very warm January, and very cold months of March and June, tended to balance each other. The cold of March permitted frost to remain in the ground later than usual, and retarded Spring growth about two weeks; the cold June following, with a slight excess of precipitation, was a further deterrent to the progress of vegetation. Six months were above, and six below normal in temperature. February, June, July and December were the only months above normal in precipitation. From an agricultural viewpoint, the deficiency of moisture was not greatly detrimental, owing to the lack of great heat. Had there been great heat with the lack of rain, or an abundance of rain with the low temperature, conditions would have been decidedly unfavorable.

The temperature for the year averaged 51.2°, which was 0.3° below normal; the warmest month was July, 74.4°; and the coldest, February, 28.1°. The highest temperature was 100° at Bridgeton, Indian Mills and Somerville, on August 22d, and the lowest, -18° at Layton and Sussex on February 15th. Totals of precipitation averaged for the year 38.17 inches, which was 9.28 below normal, the greatest monthly average was 5.40 inches in July, and the least, 1.34 in August. The greatest monthly rainfall was 9.01 inches at Chatham in July, and the least, 0.27 inch at Newark in August. The snowfall for the State averaged 48.3 inches, which was 14.7 inches above normal; in the Highlands the depth was 72.6 inches, the Red Sandstone Plain, 57.0, the Southern Interior, 33.6, and the Coast, 39.1 inches. The average number of days on which 0.01 inch or more precipitation occurred was 121, which was 7 more than normal. The average number of clear days was 159, which was 18 more than normal; partly cloudy, 100, or 17 fewer than normal; cloudy, 107, or 1 below normal. The prevailing wind direction was from the northwest.

THE WEATHER BY MONTHS.

JANUARY.—The weather was remarkable in that it was one of the warmest months of January on record, and was the driest. There was hardly enough snow to consider, and many out-of-door occupations, usually suspended at this season, were satisfactorily carried on. A region stretching from Hunterdon into Morris county was practically without snow, and the section of greatest snowfall was in the southeastern counties. No typical northeast storm occurred during the month, and the prevailing winds were from the southwest.

FEBRUARY.—Rough weather was pronounced, with more typical winter extremes than usually occur in any one month, and was in striking contrast with the mildness of January. There was more wind, snow, cloudiness and cold than usual, but was interspersed with warm periods occasionally. On the 2d-3d, there was a snowstorm of some 6 inches or more, and on the 12th-13th another generous fall occurred, so that there was good sleighing in the northern half of the State during most of month. There were cold waves on the 8th, 14th, 19th, and 21st, the most severe low temperature being on the 14th-15th, when minima from zero to 18° below occurred.

MARCH.—Temperatures averaged lower than in any March since 1885, and was one of the most snowy. The average depth of snow was 19.3 inches, which was 13.4 inches greater than normal. In the first 23 days of the month snow fell practically every day in some portion of the State. With temperatures averaging slightly under freezing and the persistence of snow covering, the outlook for agriculture became unfavorable with the prospect of a "late Spring". Two successive clear days occurred but once. Snow disappeared generally the 25th and 26th, and temperatures rose well above 60° on the last two days of the month.

APRIL.—The temperature was somewhat below normal, which, added to the almost unprecedented cold of March, was conducive to a very backward Spring. Had not the precipitation been slightly deficient, agriculture would have been still further seriously handicapped. On the 8th-9th occurred the final snowstorm of the season, which was general throughout the State, except in Cape May county. Cloudiness was excessive, and altogether the weather was generally unpleasant. It rained on almost successive days from the 2d to the 9th, and from the 22d to the 28th.

MAY.—The general weather conditions were typical of the season. Heat, moisture, and cloudiness were approximately normal. From the 14th to the 24th it was consistently cooler than normal, but during the remainder of the month, the warmth was slightly above normal. There was insufficient warm, bright weather to overcome the backward season, and crop growth did not make an adequate recovery. Thunder showers on the 28th and 29th in northeastern counties were severe, and caused some fires and interruption of electrical service. Hail attended the storm of the 28th in many sections.

JUNE.—The weather was not pleasant; while the amount of rainfall was approximately normal, its frequency of occurrence was greater than usual, with a consequent subnormal amount of sunshine. This is the first time on record that 90° or higher has not occurred in some portion of the State in June, but the highest this month was only 87°. There were but 5 days on which the temperature was up to or above normal, while the subnormal departure was as large as 10° to 14°. Agriculture made slow and unsatisfactory progress. There was a notably severe hail storm at Vineland on the 11th.

JULY.—Temperature and rainfall were slightly above normal with much oppressive weather resulting. There were but few instances of consecutive dry days, the principal ones being those commencing on the 6th and 28th, and these were also the cool-

est periods of the month. The weather was notably favorable for crop growth, but lack of sunshine and frequency of rain rendered the harvesting of hay and grain in good condition rather fortuitous. The high temperature and humidity were undoubtedly contributing factors to the development of insect and fungus enemies of plant life, and possibly, in some manner, assisted in the carrying of the germs of poliomyelitis, which became a severe epidemic.

AUGUST.—The month was somewhat warmer than normal and was the driest August on record. The hottest days were the 21st, 22d and 23d, with temperatures of more than 10° above normal, and also were the hottest days of the year. By far the bulk of the rain occurred on three days, the 8th, 23d, and 28th, with many consecutive cloudless days. There was an average deficiency of over three and a half inches in rainfall, and this resulted in a considerable loss in crop production. The unfavorable effect of the dry weather of this month, was however, partly mitigated by a surplus of rain that fell in July. At Phillipsburg the month was the driest in 33 years, and the warmest in 25 with two exceptions. At South Orange the rain record was the smallest in 46 years, except in 1881. At Newark it was the least August precipitation in 74 years, (from 1843 to date).

SEPTEMBER.—Generally pleasant weather prevailed during the month. It was slightly cooler and drier than usual, with very little cloudiness. Low temperatures projected southward into the "Pines" and cranberry bogs, and it was cooler in portions of the interior of Ocean and Burlington counties than in regions of much greater elevation more to the northward. The crop growing season was not a favorable one, except for wheat and hay. Owing to dryness, crops matured sufficiently early so that they were in little danger from frost, and plowing and seeding were retarded for the same reason.

OCTOBER.—Unusually pleasant weather prevailed, with little rain and much sunshine. Temperatures averaged slightly above normal except for a restricted area along the coastal margin. There was a warm period on the 8th and 9th, temperatures going well over 80°. Heavy frosts occurred on the 1st and 11th, on the latter date reaching extreme southern portions of the State, and thus was provided the prerequisite for many days succeeding of fine "Indian Summer" weather. The 19th was the only day without an appreciable amount of sunshine. Fall plowing and seeding and germination of grain and grass seed were retarded for lack of rain. Natural water courses became low, and in some instances it was necessary to haul water for livestock.

NOVEMBER.—There was a general absence of notable weather features during the month, with an unusually clear sky and large percentage of possible sunshine. Except in a few widely scattered instances, there was not enough snow to measure, and only in the northernmost counties were there many consecutive days of freezing weather. Vegetation in need of moisture for better withstanding the winter was adequately supplied, but wells ran low, and stream flow was below normal. The usual out-of-door occupations for the time of year were more than ordinarily favored by the pleasant weather.

DECEMBER.—The weather of the first decade was relatively mild and pleasant, but this was followed by a pronounced change to typical winter weather for the remainder of the month, in all portions of the State except the south. With the commencement of the second decade, temperatures continued below freezing, and a snowstorm on the 15th provided sleighing for about a week from central portions of the State northward. Ponds and streams closed, and the Delaware was frozen to tide-water. Stormy weather occurred with frequent regularity, and for approximately a third of the month there were hard blows along the shore, being mostly from the northwest. A thunder-

storm occurred on the 22d, being perhaps one of but four or five similar occurrences in some 50 years, and was attendant upon barometer readings of just under 29 inches.

COMPARATIVE ANNUAL DATA FOR THE STATE.

Year.	Temperature.			Average precipitation.	Year.	Temperature.			Average precipitation.
	Mean.	High-est.	Low-est.			Mean.	High-est.	Low-est.	
1885.....	50.5	100	-2	37.87	1901....	51.4	107	-8	51.80
1886.....	50.2	98	-10	46.54	1902....	51.8	100	-11	59.44
1887.....	51.1	102	-6	47.66	1903....	51.7	100	-16	56.25
1888.....	50.0	99	-12	52.20	1904....	49.3	100	-34	37.41
1889.....	52.8	95	-3	63.33	1905....	51.3	102	-18	42.06
1890.....	53.2	101	0	49.34	1906....	52.8	98	-15	46.38
1891.....	53.2	102	1	47.98	1907....	50.4	96	-22	51.65
1892.....	51.4	105	-6	42.04	1908....	52.6	106	-17	42.58
1893.....	50.8	103	-21	47.90	1909....	52.0	100	-15	40.86
1894.....	53.0	106	-11	47.37	1910....	52.0	99	-15	39.73
1895.....	51.7	109	-12	37.29	1911....	52.6	104	-12	50.36
1896.....	51.7	105	-15	42.51	1912....	51.3	100	-32	46.61
1897.....	52.0	102	-6	51.72	1913....	54.2	100	-11	46.99
1898.....	53.2	107	-15	52.35	1914....	51.4	99	-18	39.23
1899.....	52.1	103	-21	45.84	1915....	52.5	98	-5	47.37
1900.....	53.8	104	-9	42.71	1916....	51.2	100	-18	38.17

MONTHLY STATE DATA FOR 1916.

Month.	Temperature.				Precipitation.			
	Mean.	Depart-ure from normal.	Highest.	Lowest.	Average.	Depart-ure from normal.	Greatest.	Least.
January.....	35.1	+5.2	74	-8	1.50	-2.28	2.96	0.92
February.....	28.1	-2.0	63	-18	4.21	+0.20	6.17	2.84
March.....	31.7	-6.3	71	-9	3.48	-0.57	4.96	2.38
April.....	48.2	-0.7	85	20	3.32	-0.19	6.14	0.90
May.....	61.1	+0.9	90	32	3.48	-0.43	5.27	2.14
June.....	64.7	-4.4	87	36	4.20	+0.37	5.99	2.22
July.....	74.4	+0.7	97	45	5.40	+0.58	9.01	3.15
August.....	73.2	+1.4	100	40	1.34	-3.56	4.15	0.27
September.....	65.2	-0.6	98	31	2.84	-1.11	5.29	1.29
October.....	55.1	+1.1	92	23	1.37	-2.34	2.38	0.51
November.....	43.3	+0.5	75	11	2.11	-1.29	3.81	0.80
December.....	32.3	-0.7	70	-8	4.61	+0.75	6.34	3.35
Year.....	*51.2	-0.3	100	-18	**38.17	-9.28	9.01	0.27

* Mean of 28 stations.

** Mean of the sums of 35 stations.

KILLING FROSTS.

Stations.	Last in spring.	First in autumn.	Stations.	Last in spring.	First in autumn.
<i>The Highlands and Kittatinny Valley.</i>			Plainfield.....	Apr. 11	Oct. 11
Belvidere.....	Apr. 16	Oct. 1	Somerville.....	do. 16	do. 18
Charlotteburg.....	do. 11	Sept. 20	South Orange.....	do. 9	Nov. 14
Culvers Lake.....	May 19	Oct. 1	<i>The Southern Interior.</i>		
Dover.....	Apr. 11	do. 1	Bridgeton.....	Apr. 10	Oct. 15
Layton.....	May 19	do. 1	Burlington.....	do. 8	do. 11
Newton.....	Apr. 11	do. 1	Clayton.....	do. 11	do. 11
Phillipsburg.....	do. 11	do. 1	Hightstown.....	do. 16	do. 15
Sussex.....	do. 16	.....	Imlaystown.....	do. 16	.....
<i>The Red Sandstone Plain.</i>			Indian Mills.....	do. 16	Oct. 11
Bayonne.....	Apr. 9	.....	Lakewood.....	do. 16	do. 11
Bergen Point.....	do. 11	Nov. 16	Moorestown.....	do. 9	do. 11
Boonton.....	do. 11	Oct. 1	Trenton.....	do. 10	do. 11
Elizabeth.....	do. 11	Nov. 7	Tuckerton.....	do. 11	do. 11
Flemington.....	do. 9	Oct. 15	Vineland.....	do. 11	do. 11
Highwood.....	do. 16	do. 11	Woodbine.....	do. 16	do. 11
Jersey City.....	do. 9	Nov. 15	<i>The Sea Coast.</i>		
Lambertville.....	do. 11	do. 7	Asbury Park.....	Apr. 9	Nov. 16
Little Falls.....	do. 11	Oct. 15	Atlantic City.....	Mar. 24	do. 16
Newark.....	do. 9	Nov. 14	Cape May City.....	do. 24	do. 16
New Brunswick.....	do. 10	Oct. 15	Long Branch.....	Apr. 9	do. 7
Palisades Park.....	do. 11	do. 11	Sandy Hook.....	do. 9	do. 16
Paterson.....	do. 11	do. 18	.....	.....	.....

Climatological Data for the Year 1916.

STATION.	Counties.	Elevation, feet.	Temperature (degrees Fahrenheit).						Precipitation (inches).										Sky.				Prevailing direction of wind.
			Length of record, years.	Annual mean.	Highest.	Date.	Lowest.	Date.	Length of record, years.	Total for the year.	Greatest monthly.	Month.	Least monthly.	Month.	Total snowfall (unmelted).	Number days with .01 or more.	Number clear days.	Number partly cloudy days.	Number cloudy days.				
The Highlands and Kittatinny Valley.																							
Belvidere.....	Warren.....	289	25	.....	93	July 13†	-8	Feb. 15	25	41.65	6.26	July	1.43	Oct	54.5	95	.....	.....	.....	.....	.....		
Charlotteburg.....	Passaic.....	719	24	47.5	95	Aug. 22	-8	do. 14†	24	38.26	5.08	July	1.02	Jan	.....	106	212	104	50	sw.	.....		
Culvers Lake.....	Sussex.....	848	.....	.....	.....	.....	-16	do. 15	15	42.06	7.45	July	0.94	Oct	97.1	140	222	53	91	e.	.....		
Dover.....	Morris.....	600	32	48.1	96	Aug. 21†	-7	do. 14†	32	41.05	5.41	July	1.46	Oct	.....	124	.....	.....	.....	.....	.....		
Layton.....	Sussex.....	480	16	48.3	99	do. 21†	-18	do. 15	16	40.27	5.18	Jun	1.50	Jan	79.5	139	203	60	103	sw.	.....		
Newton.....	Sussex.....	769	35	.....	94	do. 21	.....	.....	35	.....	6.06	July	0.51	Oct	.....	.....	.....	.....	.....	.....	.....		
Phillipsburg.....	Warren.....	363	26	51.0	99	do. 22	-5	Feb. 15	34	40.75	7.87	July	1.07	Aug	59.4	141	197	57	112	nw.	.....		
Sussex.....	Sussex.....	442	22	.....	.....	.....	-18	do. 15	26	.....	7.01	July	.....	.....	.....	.....	.....	.....	.....	.....	.....		
The Red Sandstone Plain.																							
Bayonne.....	Hudson.....	50	25	.....	98	Aug. 22	0	Feb. 14†	26	.....	5.39	July	0.84	Aug	.....	.....	.....	.....	.....	.....	.....		
Bergen Point.....	Hudson.....	37	19	51.0	96	do. 22	-1	do. 14	19	41.92	5.85	July	1.11	Aug	.....	94	.....	.....	.....	nw.	.....		
Boonton.....	Morris.....	400	2	.....	98	do. 22	-9	do. 15	26	34.57	4.35	Jun	1.01	Aug	50.8	138	.....	.....	.....	sw.	.....		
Chatham.....	Morris.....	330	.....	.....	.....	.....	.....	.....	14	.....	9.01	July	0.71	Aug	.....	.....	.....	.....	.....	.....	.....		
Elizabeth.....	Union.....	45	37	51.9	98	do. 6†	-8	Feb. 15	37	41.34	5.58	Feb.	0.50	Aug	60.5	129	136	131	99	sw.	.....		
Flemington.....	Hunterdon.....	140	19	51.5	98	do. 21†	-10	do. 15	28	33.96	5.47	July	0.85	Oct	50.5	127	.....	.....	.....	w.	.....		
Highwood.....	Bergen.....	90	27	49.0	91	July 8†	-12	do. 15	27	40.76	5.99	Jun	1.23	Jan	66.6	118	108	145	113	nw.	.....		
Jersey City.....	Hudson.....	10	17	52.7	98	Aug. 22	1	do. 14†	17	38.64	5.34	Jun	0.68	Aug	58.0	128	135	122	109	nw.	.....		
Lambertville.....	Hunterdon.....	80	29	52.6	95	do. 22	0	do. 14	29	34.91	5.30	July	1.21	Oct	.....	111	145	146	75	nw.	.....		
Little Falls.....	Passaic.....	180	2	.....	95	July 12†	-2	do. 14	13	38.57	5.76	Jun	1.14	Jan	.....	123	.....	.....	.....	w.	.....		
Newark.....	Essex.....	159	73	51.0	96	Aug. 21	-1	do. 14	74	35.05	5.12	Dec	0.27	Aug	62.3	123	153	63	150	nw.	.....		
New Brunswick.....	Middlesex.....	110	63	.....	96	do. 21†	-4	do. 15	63	39.77	6.96	July	1.38	Oct	49.3	119	198	83	84	w.	.....		
Palisades Park.....	Bergen.....	80	1	.....	95	do. 22	.....	.....	1	.....	5.29	Jun	.....	.....	.....	.....	.....	.....	.....	nw.	.....		
Paterson.....	Passaic.....	80	45	52.1	99	do. 22	-1	Feb. 15	45	38.82	5.20	Feb	0.37	Aug	.....	125	.....	.....	.....	nw.	.....		
Plainfield.....	Union.....	100	30	50.8	94	do. 22†	-3	do. 15	30	39.60	6.80	July	1.28	Aug	50.9	138	134	102	130	sw.	.....		
Pompton Plains.....	Morris.....	195	.....	.....	.....	.....	.....	.....	14	43.24	7.33	July	0.57	Aug	72.0	126	.....	.....	.....	.....	.....		
Somerville.....	Somerset.....	60	34	50.0	100	do. 22	-10	Feb. 15	34	39.84	8.75	July	0.63	Aug	40.4	119	151	100	115	nw.	.....		
South Orange.....	Essex.....	200	46	50.3	93	July 31	-1	do. 14	46	38.66	4.98	Jun	0.41	Aug	65.7	113	152	97	117	nw.	.....		
New York, N. Y.....	.....	365	46	51.3	94	Aug. 22	1	do. 14	46	33.17	4.49	Feb	0.59	Aug	52.9	133	101	124	141	nw.	.....		
The Southern Interior.																							
Bridgeton.....	Cumberland.....	30	30	54.0	100	Aug. 22	2	Feb. 15	35	36.84	5.24	July	1.23	Aug	32.0	101	202	59	105	w.	.....		
Burlington.....	Burlington.....	12	3	52.9	96	do. 22	1	do. 14†	30	38.93	8.18	July	1.19	Oct	29.8	125	.....	.....	.....	nw.	.....		
Clayton.....	Gloucester.....	126	20	.....	99	do. 22	0	do. 15	24	33.56	5.65	July	0.78	Aug	33.8	111	214	80	72	.....	.....		
Hammononton.....	Atlantic.....	103	.....	.....	.....	.....	.....	.....	15	.....	6.48	July	.....	.....	.....	.....	.....	.....	.....	.....	.....		
Hightstown.....	Mercer.....	140	24	.....	99	Aug. 22	-9	Feb. 15	24	.....	5.08	July	0.81	Oct	.....	.....	.....	.....	.....	nw.	.....		
Imlaystown.....	Monmouth.....	185	28	.....	.....	.....	-5	do. 15	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
Indian Mills.....	Burlington.....	76	27	52.0	100	Aug. 22	-5	do. 15	27	41.97	6.35	July	1.44	Oct	42.7	116	145	124	97	nw.	.....		
Lakewood.....	Ocean.....	54	13	50.5	95	do. 23	-4	do. 15	13	41.02	6.17	Feb	1.36	Oct	36.5	114	128	93	145	nw.	.....		
Moorestown.....	Burlington.....	75	54	52.9	94	do. 22	-1	do. 15	54	35.77	5.42	July	1.05	Oct	45.2	107	168	131	67	nw.	.....		
Northfield.....	Atlantic.....	25	.....	.....	.....	.....	.....	.....	9	37.69	5.09	July	1.07	Aug	25.1	122	.....	.....	.....	.....	.....		
Pleasantville.....	Atlantic.....	26	.....	.....	.....	.....	.....	.....	18	.....	4.62	July	0.90	Apr	.....	.....	.....	.....	.....	.....	.....		
Trenton.....	Mercer.....	190	45	51.6	97	Aug. 22	0	Feb. 14	45	31.93	5.94	July	0.96	Oct	32.7	128	111	103	152	w.	.....		
Tuckerton.....	Ocean.....	23	18	52.0	96	do. 8	-2	do. 15	23	41.69	6.76	July	1.30	Sept	40.7	108	163	121	82	.....	.....		
Vineland.....	Cumberland.....	87	48	53.1	97	do. 22	-1	do. 15	48	32.23	5.38	July	0.72	Aug	.....	117	.....	.....	.....	se.	.....		
Woodbine.....	Cape May.....	43	25	.....	97	do. 22	0	do. 15	25	.....	5.34	Feb	0.66	Aug	17.4	.....	.....	.....	.....	.....	.....		
Philadelphia, Pa.....	.....	117	46	54.3	97	do. 22	5	do. 14	46	32.27	5.45	Dec	0.94	Aug	34.3	120	124	111	131	nw.	.....		
The Sea Coast.																							
Asbury Park.....	Monmouth.....	22	27	50.3	95	Aug. 8	4	Feb. 15	27	.....	4.28	Jun	.....	.....	43.0	116	.....	.....	.....	w.	.....		
Atlantic City.....	Atlantic.....	16	43	52.1	91	July 31	4	do. 15	43	34.11	4.84	Dec	1.21	Aug	24.0	126	122	82	162	sw.	.....		
Cape May City.....	Cape May.....	17	32	53.1	95	Aug. 22	5	do. 14	32	36.18	5.29	Sept	0.90	Oct	29.9	129	131	142	93	s.	.....		
Long Branch.....	Monmouth.....	25	9	50.2	95	do. 8	0	do. 14	9	37.71	5.69	Dec	0.89	Oct	50.0	130	.....	.....	.....	nw.	.....		
Sandy Hook.....	Monmouth.....	22	18	51.3	92	do. 8	6	do. 14	18	32.70	4.67	Dec	0.92	Oct	48.8	131	130	109	127	nw.	.....		

† On other days also.

Monthly and Annual Precipitation for the Year 1916, with Departures from the Normal.

STATIONS.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.		Annual.	
	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.
<i>The Highlands and Kittatinny Valley.</i>																										
Belvidere.....	1.64	-2.11	3.70	-0.77	3.77	-0.27	4.04	+0.77	2.73	-1.16	5.47	+1.07	6.26	+0.66	1.69	-3.27	3.63	-0.29	1.43	-2.41	2.67	-0.82	4.62	+0.48	41.65	-8.12
Charlottesville.....	1.02	-3.34	3.52	-1.31	2.49	-1.45	3.08	-0.85	3.55	-1.25	4.66	+0.40	5.08	+0.20	1.06	-3.69	3.77	-0.91	1.61	-2.80	3.81	+0.68	4.61	+0.22	38.26	-14.70
Culvers Lake.....	1.39	-1.79	3.54	+0.07	3.64	+0.21	4.35	+0.48	3.52	+0.02	5.56	+1.72	7.45	+2.69	1.21	-3.32	3.67	-0.14	0.94	-2.71	3.33	+0.51	3.46	-0.07	42.06	-2.33
Dover.....	1.78	-2.71	4.25	-0.14	3.56	-0.34	4.24	+0.73	2.55	-1.59	4.72	+0.60	5.41	-0.07	1.77	-3.23	2.69	-1.79	1.46	-2.54	3.36	-0.27	5.26	+1.14	41.05	-10.21
Layton.....	1.50	-2.00	3.80	+0.22	3.44	-0.23	4.96	+1.65	2.90	-0.43	5.18	+1.76	4.43	0.00	2.35	-1.29	3.41	-0.46	1.57	-1.76	3.18	+0.10	3.55	-0.62	40.27	-3.06
Newton.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Phillipsburg.....	1.40	-2.25	3.67	-0.26	3.37	-0.28	4.04	+1.02	2.51	-1.54	5.18	+1.03	7.87	+3.02	1.07	-3.63	3.70	-0.08	1.21	-2.39	2.37	-0.91	4.36	+0.68	40.75	-5.59
Sussex.....	.....	.....	3.47	-0.20	3.79	+0.12	3.50	+0.25	.....	.....	4.90	+1.17	7.01	+2.49	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<i>The Red Sandstone Plain.</i>																										
Bayonne.....	1.29	-2.84	4.61	+0.46	2.64	-1.59	3.90	+0.22	5.21	+1.63	3.89	+0.25	5.39	+0.26	0.84	-4.27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bergen Point.....	1.18	-3.24	5.03	+0.48	3.13	-1.09	4.67	+0.78	5.27	+1.29	4.51	+0.56	5.85	+0.34	1.11	-3.95	3.13	-1.40	1.86	-2.22	1.90	-1.68	4.28	+0.29	41.92	-9.84
Boonton.....	1.32	-2.88	3.69	-0.67	2.81	-0.93	2.85	-0.91	3.59	-0.66	4.35	+0.61	4.21	-1.25	1.01	-4.38	2.86	-1.63	1.20	-2.64	2.99	-0.68	3.69	-0.41	34.57	-16.43
Chatham.....	1.39	-2.50	5.04	+1.04	3.48	-0.39	6.14	+2.49	3.84	-0.08	5.87	+1.83	9.01	+3.73	0.71	-4.21	3.23	-0.90	.....	.....	.....	.....	.....	.....	.....	.....
Elizabeth.....	1.34	-2.76	5.58	+1.17	3.80	-0.46	4.41	+0.84	4.42	+0.50	4.21	+0.61	5.23	-0.03	0.50	-4.04	3.59	-0.47	1.37	-2.45	1.94	-1.40	4.95	+1.16	41.34	-7.33
Flemington.....	1.53	-1.94	3.03	-0.48	2.94	-0.67	3.04	-0.40	2.32	-1.97	3.03	-1.34	5.47	+0.51	1.20	-3.21	3.38	-0.60	0.85	-2.60	1.93	-1.42	5.24	+1.56	33.96	-12.56
Highwood.....	1.23	-2.84	4.89	+0.20	3.59	-0.56	3.64	+0.25	4.46	+0.62	5.99	+2.21	3.95	-1.42	2.23	-2.84	3.29	-0.87	1.72	-2.81	2.35	-1.28	3.42	-0.74	40.76	-10.08
Jersey City.....	0.92	-2.94	4.92	+0.84	3.71	-0.39	4.29	+0.59	4.02	+0.84	5.34	+2.04	4.37	-0.41	0.68	-3.97	3.38	-0.33	1.11	-2.64	1.71	-1.69	4.19	+0.63	38.64	-7.43
Lambertville.....	1.49	-2.25	3.02	-0.65	2.83	-1.28	3.42	+0.02	3.34	-0.73	2.73	-1.55	5.30	+0.26	1.84	-2.92	2.77	-1.41	1.21	-2.66	1.96	-1.65	5.00	+1.22	34.91	-13.60
Little Falls.....	1.14	-3.08	4.79	+0.35	2.94	-1.05	4.26	+0.72	3.60	-1.16	5.76	+1.48	3.15	-2.44	1.24	-3.87	3.62	-0.98	2.08	-1.76	2.42	-1.10	3.57	-0.27	38.57	-13.16
Newark.....	1.14	-2.62	4.13	+0.32	2.38	-1.55	3.40	-0.33	4.02	-0.02	4.22	+0.59	3.76	-0.97	0.27	-4.97	3.66	-0.19	1.14	-2.63	1.81	-1.69	5.12	+1.32	35.65	-12.74
New Brunswick.....	1.48	-2.33	4.42	+0.60	3.12	-0.79	3.52	-0.27	3.17	-0.74	3.39	-0.38	6.96	+1.91	2.61	-2.48	2.53	-1.32	1.38	-2.21	1.95	-1.64	5.24	+1.49	39.77	-8.16
Palisades Park.....	.....	.....	.....	.....	3.75	.....	3.68	.....	4.06	.....	5.29	.....	5.28	.....	1.07	.....	3.06	.....	1.44	.....	1.94	.....	4.12	.....	.....	.....
Paterson.....	1.25	-2.81	5.20	+0.64	3.34	-0.89	4.02	+0.53	4.33	-0.16	4.63	+0.31	4.02	-1.31	0.37	-4.76	2.99	-1.45	2.15	-2.00	2.21	-1.05	4.31	+0.20	38.82	-12.75
Plainfield.....	1.33	-2.56	4.47	+0.42	3.24	-0.57	3.37	-0.53	3.10	-0.73	4.80	+0.67	6.80	+1.40	1.28	-3.59	2.95	-1.50	1.78	-1.87	1.82	-1.77	4.66	+0.77	39.60	-9.96
Pompton Plains.....	1.26	-3.13	4.93	+0.34	3.21	-0.83	3.93	+0.37	4.50	+0.14	4.34	+0.18	7.33	+1.78	0.57	-4.51	3.30	-1.25	1.25	-2.51	2.64	-0.85	5.98	+2.24	43.24	-8.03
Somerville.....	1.01	-2.47	4.50	+0.82	2.84	-1.11	3.71	+0.16	3.09	-1.03	3.19	-0.96	8.75	+3.62	0.63	-4.08	4.23	+0.57	1.23	-2.18	2.09	-1.30	4.57	+1.00	39.84	-6.96
South Orange.....	1.21	-2.93	4.73	+0.57	2.96	-0.85	3.80	+0.31	4.96	+1.50	4.98	+1.42	4.21	-0.91	0.41	-4.98	3.27	-0.82	2.38	-1.43	1.85	-1.52	3.90	+0.07	38.66	-9.57
New York, N. Y.....	1.08	-2.71	4.49	+0.62	3.71	-0.39	3.28	-0.02	3.49	+0.31	3.94	+0.68	3.44	-1.10	0.59	-3.94	2.98	-0.61	0.63	-3.08	1.57	-1.87	3.97	+0.52	32.17	-11.59
<i>The Southern Interior.</i>																										
Bridgeton.....	1.96	-1.78	4.35	+0.10	4.15	-0.32	2.52	-0.91	3.43	-0.50	3.99	+0.22	5.24	+0.81	1.23	-3.51	1.83	-1.98	1.52	-2.01	2.07	-1.19	4.55	+0.68	36.84	-10.39
Burlington.....	1.58	-1.96	4.57	+0.30	3.51	-0.57	3.67	+0.30	2.22	-2.01	4.06	+0.14	8.18	+3.15	1.50	-4.02	2.44	-1.48	1.19	-2.26	1.59	-2.15	5.33	+1.42	38.93	-9.74
Clayton.....	1.97	-1.79	3.86	-0.30	3.82	-0.16	1.58	-1.56	2.14	-1.12	3.83	+0.43	5.65	+1.38	0.78	-4.37	1.33	-2.69	1.48	-2.03	2.23	-1.30	4.89	+1.20	33.56	-12.31
Haddonfield.....	1.90	-1.49	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hammonton.....	.....	.....	4.01	-0.02	4.14	-0.23	2.11	-1.73	3.63	-0.39	3.20	+0.01	6.48	+1.79	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hightstown.....	1.38	-2.31	3.36	-0.51	.....	.....	2.64	-1.27	2.41	-1.41	2.79	-1.22	5.08	-0.39	2.12	-2.65	2.08	-1.80	0.81	-3.42	1.72	-1.94	4.02	+0.31	.....	.....
Inlaytown.....	1.60	-1.85	3.60	+0.09	3.05	-1.14	3.45	-0.05	3.25	-0.64	2.30	-1.68	3.35	-1.17	2.65	-2.21	1.85	-2.46	.....	.....	.....	.....	.....	.....	.....	.....
Indian Mills.....	2.07	-1.63	4.97	+0.87	4.76	+0.66	2.76	-0.37	3.65	-0.39	4.50	+0.71	6.35	+2.29	1.54	-3.63	1.96	-2.21	1.44	-2.14	2.07	-1.53	5.90	+1.81	41.97	-5.56
Lakewood.....	1.62	-2.16	6.17	+2.19	3.97	-0.46	3.02	-0.71	3.13	-0.73	5.37	+1.70	4.00	-1.03	4.15	-0.92	1.79	-2.09	1.36	-2.34	1.65	-2.00	4.79	+1.07	41.02	-7.48
Moorestown.....	1.57	-1.91	3.57	-0.19	3.56	-0.25	3.56	+0.37	3.32	-0.71	3.78	-0.02	5.42	+0.84	1.57	-3.17	1.81	-1.95	1.05	-2.59	1.60	-1.82	4.96	+1.38	35.77	-10.02
Northfield.....	1.93	.....	4.45	.....	4.13	.....	1.80	.....	4.36	.....	3.92	.....	5.09	.....	1.07	.....	2.71	.....	1.34	.....	1.81	.....	5.08	.....	37.69	.....
Pleasantville.....	1.67	-1.73	2.84	-0.23	.....	.....	0.90	-2.62	3.33	-0.03	.....	.....	4.62	+0.48	0.92	-3.77	2.46	-0.95	1.60	-2.02	1.48	-1.88	3.62	-0.05	.....	.....
Trenton.....	1.26	-1.91	3.16	-0.15	2.61	-1.43	2.67	-0.22	2.45	-1.07	2.94	-0.55	5.94	+1.17	1.25	-4.12	1.51	-1.08	0.96	-2.45	1.31	-2.12	4.87	+1.71	31.93	-12.62
Fuckerton.....	2.96	-0.70	3.93	0.00	4.36	-0.03	2.61	-1.18	3.87	+0.44	4.22	+0.45	6.76	+2.86	1.61	-4.17	1.30	-2.06	1.57	-2.10	2.16	-1.30	6.34	+2.06	41.69	-5.73
Vineland.....	2.13	-1.64	3.37	-0.82	3.30	-0.86	2.10	-1.24	2.79	-0.98	2.22	-1.36	5.38	+0.87	0.72	-4.25	2.44	-1.40	1.45	-2.01	1.83	-1.47	4.50	+0.66	32.23	-14.50
Woodbine.....	2.37	-1.28	5.34	+1.15	4.96	+0.88	3.12	-0.46	3.24	-0.66	3.09	-0.41	3.21	-0.81	0.66	-3.64	3.47	-0.56	1.99	-1.60	2.25	-0.90	.....	.....	.....	.....
Philadelphia, Pa.....	1.50	-1.91	3.55	+0.07	3.75	+0.30	2.97	+0.06	2.75	-0.45	2.83	-0.47	3.40	-0.93	0.94	-3.67	2.44	-0.94	1.21	-1.89	1.48	-1.58	5.45	+2.41	42.27	-9.00
<i>The Sea Coast.</i>																										
Asbury Park.....	1.21	-2.53	3.93	-0.04	3.05	-1.25	1.64	-2.03	2.16	-1.55	4.28	+0.48	4.24	-1.01	1.59	-3.55	2.55	-0.69	.....	.....	.....	.....	.....	.....	.....	.....
Atlantic City.....	2.09	-1.40	4.54	+1.16	4.41	+0.68	1.8																			

Monthly and Annual Mean Temperatures for the Year 1916, with Departures from the Normal.

STATIONS.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.		Annual.	
	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.
<i>The Highlands and Kittatinny Valley.</i>																										
Belvidere.....	33.3	+5.8	26.4	-1.0	31.2	-5.6	49.0	-0.6	61.4	+0.7	.....	.....	74.8	+2.1	^b 72.4	+1.6	^a 64.4	-0.7	53.4	+0.9	^c 40.6	-0.6	^b 30.9	+0.1	.....	.....
Charlotteburg.....	31.6	+4.5	^a 24.7	-1.6	28.6	-6.1	^b 45.8	-0.9	58.2	+0.9	61.4	-4.1	71.8	+2.3	69.6	+1.9	60.8	-1.5	50.0	-0.4	39.0	-1.5	28.8	-1.8	47.5	-0.7
Dover.....	31.4	+4.8	24.1	-2.1	^a 28.8	-6.1	46.2	-1.1	58.9	+0.3	62.4	-4.8	72.6	+1.2	^a 71.2	+2.0	^c 62.0	-0.6	^a 51.3	+0.6	39.8	-0.5	29.0	-1.1	48.1	-0.7
Layton.....	31.4	+7.4	23.4	-0.7	27.1	-7.1	46.8	+0.3	59.6	+1.7	64.2	-2.1	73.6	+3.4	71.4	+3.0	^b 63.0	+1.2	52.1	+2.5	39.3	+0.9	28.2	+0.8	48.3	+0.9
Newton.....	.....	.....	.....	.....	27.5	-8.3	46.4	-1.2	59.4	+0.1	62.4	+5.3	^c 73.2	+1.3	^b 71.4	+1.6	62.6	-1.0	52.9	+1.2	40.3	+0.5	28.2	-1.1	.....	.....
Phillipsburg.....	34.3	+6.4	26.6	-1.2	31.4	-6.5	49.4	-0.2	62.2	+0.9	65.6	-4.1	75.6	+1.6	74.4	+2.7	65.4	0.0	54.1	+1.2	41.6	0.0	31.1	-0.2	51.0	+0.1
Sussex.....	31.4	+5.3	23.3	-2.9	27.8	-8.6	^a 46.6	-1.7	^c 59.8	-0.1	^a 62.8	-4.8	73.4	+1.7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<i>The Red Sandstone Plain.</i>																										
Bayonne.....	34.9	+4.8	27.6	-2.9	31.6	-6.4	47.8	-1.2	^a 61.0	+0.7	65.2	-4.5	74.9	+0.5	74.2	+1.3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bergen Point.....	34.8	+4.6	27.6	-2.8	31.4	-6.4	^b 48.0	-0.5	60.0	+0.3	64.2	-4.6	74.4	+1.0	73.4	+1.7	64.8	-1.9	^a 56.6	+2.3	43.8	+0.8	^a 32.8	-0.2	51.0	-0.4
Boonton.....	31.1	.....	23.2	.....	28.9	.....	46.8	.....	59.4	.....	^b 63.6	.....	73.6	.....	^d 71.6	.....	.....	.....	50.8	.....	^b 40.2	.....	.....	.....	.....	.....
Elizabeth.....	35.3	+5.2	28.2	-2.2	32.2	-6.2	49.0	-1.8	61.8	-0.4	65.9	-5.3	75.8	+0.3	74.6	+0.1	67.2	+0.2	56.6	+1.9	43.8	+0.2	32.2	-1.3	51.9	-0.7
Flemington.....	34.6	+5.0	27.7	-2.8	^a 32.4	-5.1	49.4	+0.3	62.0	+2.1	65.4	-3.7	75.5	+1.6	^a 74.5	+2.7	65.8	+0.7	55.8	+1.7	42.9	+0.1	31.8	-0.2	51.5	+0.2
Highwood.....	33.2	+4.3	25.0	-3.7	29.6	-6.6	47.0	-1.5	59.0	-0.7	63.0	-5.3	72.6	+0.1	70.8	-0.4	62.6	-1.6	53.0	+0.3	41.0	-1.3	30.8	-1.6	49.0	-1.5
Jersey City.....	35.6	+4.8	28.7	-2.5	33.0	-5.2	48.8	-0.6	62.0	+0.9	66.4	-3.6	76.4	+1.7	76.4	+3.1	67.8	+0.6	57.6	+2.0	45.2	+1.6	34.2	+0.2	52.7	+0.3
Lambertville.....	37.3	+6.9	30.2	-0.2	34.2	-4.8	50.5	+0.1	62.4	+0.7	66.0	-4.3	75.8	+1.3	74.6	+2.2	66.1	+0.1	55.4	+1.8	44.8	+1.8	33.6	+0.3	52.6	+0.5
Little Falls.....	.....	.....	^a 27.3	.....	^c 31.2	.....	.....	.....	^d 61.0	.....	64.6	.....	75.2	.....	73.0	.....	64.3	.....	52.8	.....	41.7	.....	31.9	.....	.....	.....
Newark.....	33.6	+4.0	26.6	-3.2	30.6	-6.9	47.6	-1.5	61.0	+0.2	64.8	-4.9	74.6	+0.3	74.0	+1.4	65.6	-0.3	56.5	+2.1	43.9	+1.0	33.4	+0.4	51.0	-0.6
New Brunswick.....	35.4	+4.9	28.4	-2.9	31.2	-7.0	48.4	-1.3	61.6	+1.0	64.7	-4.9	74.2	-0.1	73.6	+1.2	65.6	-0.4	^c 55.5	+0.9	.....	.....	^a 32.4	-0.7	.....	.....
Palisades Park.....	.....	.....	.....	.....	30.2	.....	46.8	.....	58.8	.....	63.6	.....	73.4	.....	71.0	.....	63.6	.....	53.0	.....	41.0	.....	31.1	.....	.....	.....
Paterson.....	35.4	+6.0	28.0	-2.2	32.7	-5.8	49.4	-0.9	62.2	+0.9	65.6	-4.5	75.4	+1.1	74.7	+2.7	67.1	+0.9	56.8	+2.4	44.2	+0.9	33.5	+0.4	52.1	+0.2
Plainfield.....	34.5	+5.1	27.6	-2.6	31.8	-4.8	48.6	+0.4	60.6	+0.3	64.4	-4.9	74.2	+0.3	73.0	+0.9	64.9	-0.3	54.8	+1.8	43.0	+1.0	32.2	+0.3	50.8	-0.2
Somerville.....	33.4	+4.2	26.7	-3.3	30.6	-6.3	47.7	-1.0	60.6	+0.5	64.4	-4.8	74.1	+0.2	72.6	+0.7	64.2	-1.1	53.8	+0.4	41.0	-1.2	30.5	-1.4	50.0	-1.1
South Orange.....	34.0	+5.3	26.6	-2.4	31.0	-5.8	47.8	+0.5	60.4	+0.4	64.6	-4.2	74.2	+1.1	72.4	+1.7	64.3	+0.2	54.0	+1.1	42.5	+0.9	31.9	-0.1	50.3	-0.2
New York, N. Y.....	35.4	+5.2	27.7	-3.0	32.2	-5.3	47.1	-1.0	59.8	+0.5	64.2	-4.3	73.8	+0.3	73.6	+1.4	66.0	-0.5	57.2	+1.6	44.7	+0.7	33.8	-0.6	51.3	-0.4
<i>The Southern Interior.</i>																										
Bridgeton.....	37.7	+4.7	32.1	-1.8	35.8	-5.3	51.8	0.0	65.2	+1.3	68.0	-5.4	76.6	-0.5	75.6	+0.5	67.4	-0.8	57.6	+0.9	46.0	+1.1	34.0	-1.6	54.0	-0.6
Burlington.....	36.9	+6.1	30.0	-0.9	33.7	-6.2	50.8	-0.3	64.4	+2.3	66.5	-4.2	76.0	+0.7	74.8	+1.4	67.2	+0.2	57.4	+2.7	45.0	+1.0	32.6	-1.5	52.9	+0.1
Clayton.....	36.9	+6.0	30.7	-1.0	34.2	-5.6	.....	.....	^c 63.8	+1.9	66.8	-4.6	75.8	-0.2	^a 74.8	+1.3	66.2	-0.5	56.8	+1.7	44.2	+0.8	33.0	-1.0	.....	.....
Haddonfield.....	36.4	+6.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hightstown.....	^d 35.6	+4.7	^a 28.4	-1.7	31.0	-8.0	^b 48.4	-1.4	^c 62.1	+1.0	^a 65.6	-3.8	74.7	+0.7	.....	.....	65.9	-0.7	^b 55.8	+2.1	^a 44.4	+0.8	^b 31.8	-1.8	.....	.....
Imlaystown.....	34.8	+3.1	27.2	-3.7	^a 30.6	-9.1	47.5	-3.1	60.9	+1.3	64.4	-6.4	^a 73.6	-1.6	.....	.....	^b 64.2	-2.5	.....	.....	.....	.....	.....	.....	.....	.....
Indian Mills.....	37.0	+5.6	30.2	-1.9	33.0	-6.8	48.9	-1.4	63.6	+1.6	65.4	-5.6	74.6	-0.5	73.4	+0.3	65.4	-0.7	56.2	+1.8	44.2	+0.8	32.6	-1.4	52.0	-0.7
Lakewood.....	36.2	+4.1	28.6	-1.2	31.6	-8.4	47.3	-2.4	61.2	+0.7	64.4	-3.2	74.0	+1.1	71.7	+1.0	63.4	-2.0	53.2	-2.1	42.6	-0.6	32.0	-1.8	50.5	-1.3
Moorestown.....	37.4	+7.3	30.6	-0.4	^a 33.5	-5.3	50.8	+0.8	63.4	+2.3	66.4	-3.8	75.9	+1.1	^a 74.3	+1.8	66.6	+0.6	56.6	+2.4	45.5	+2.5	33.5	+0.2	52.9	+0.8
Trenton.....	35.5	+5.0	27.8	-2.9	32.2	-6.9	48.8	-1.0	62.2	+1.1	65.8	-3.7	74.9	+0.4	74.0	+1.0	66.1	-0.8	56.1	+0.5	43.7	-0.7	32.2	-2.2	51.6	-0.9
Tuckerton.....	36.6	+4.9	31.0	-1.1	32.9	-6.1	48.5	+0.6	61.8	+2.1	65.0	-4.0	74.8	+0.7	73.8	+1.6	^b 65.8	-0.2	55.4	+0.6	^b 44.2	+0.2	33.6	-0.9	52.0	-0.1
Vineland.....	^a 38.0	+6.0	31.4	-1.1	^a 34.6	-5.7	^c 50.6	-0.1	^a 65.2	+3.0	^b 66.6	-5.0	^b 75.7	-0.7	^c 74.0	+0.4	66.0	-0.9	56.8	+1.4	45.3	+1.4	33.4	-1.0	53.1	-0.2
Woodbine.....	^b 39.0	+6.6	32.6	0.0	35.0	-5.1	^c 50.8	+1.3	.....	.....	.....	.....	75.5	+1.6	74.0	+1.8	65.6	-0.7	58.0	+2.4	45.9	+1.9	^c 35.0	0.0	.....	.....
Philadelphia, Pa.....	38.2	+6.4	31.3	-0.5	35.4	-4.6	51.4	+0.6	64.7	+2.5	67.9	-3.3	76.8	+1.0	76.4	+2.6	68.5	+1.1	58.6	+2.3	46.8	+1.9	35.7	0.0	54.3	+0.7
<i>The Sea Coast.</i>																										
Asbury Park.....	36.1	+4.7	29.2	-2.7	31.6	-6.7	45.8	-2.3	59.0	+0.3	62.0	-6.2	71.6	-1.3	71.0	-0.9	64.6	-2.3	55.4	-0.2	44.4	+0.2	32.9	-1.6	50.3	-1.6
Atlantic City.....	37.0	+4.5	31.7	-1.3	34.0	-4.8	47.2	-0.4	60.3	+2.8	63.8	-3.0	72.4	-0.1	73.2	+0.6	66.4	-1.2	56.7	-0.7	47.2	+1.7	35.3	-1.1	52.1	-0.3
Cape May City.....	37.4	+3.3	32.8	-1.3	35.3	-5.5	49.4	+1.0	60.8	+2.2	65.3	-2.4	73.9	+0.5	73.9	+0.5	66.5	-2.5	57.5	-2.1	47.8	+0.4	36.6	-1.4	53.1	-0.6
Long Branch.....	35.7	.....	27.4	.....	31.5	.....	46.9	.....	^a 58.8	.....	^c 62.8	.....	72.9	.....	71.5	.....	64.3	.....	54.5	.....	42.8	.....	32.9	.....	50.2	.....
Sandy Hook.....	35.0	+5.3	28.9	-1.8	31.4	-5.3	45.8	-0.9	58.8	0.0	64.0	-4.4	73.6	-0.3	74.0	+1.3	67.0	-0.4	^a 57.4	+0.7	45.7	+1.2	34.3	-0.3	51.3	-0.4

Letters of alphabet denote number of days missing.

Monthly Maximum Temperatures for the Year 1916, with Dates.

STATIONS.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.	
	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.
<i>The Highlands and Kittatinny Valley.</i>																								
Belvidere.....	64	27	57	1	70	31	80	30	85	28†	81	30	93	13	93 ^b	21	91	8	84	9	67	2	63	5
Charlotteburg.....	66	27	55	1	65	31	75	30	82	29	82	29	91	21†	95	22	88	8	85	8	65	9	57	5†
Dover.....	66	27	58	1	68	31	77	30	82	28†	83	28†	92	12†	96	21†	90	8	84	8	69	9	60	5
Layton.....	65	27	56	1	66	31	78	30	83	28†	83	28†	94	31	99	21†	90	8	85	8	66	9	66	5
Newton.....					59	30	75	30	81	28	80	17†	90	12†	94	21	90	8	82	9	68	9	58	5
Phillipsburg.....	68	27	61	1	68	31	77	30	88	28	87	27	94	12†	99	22	93	8	84	8	70	9	64	5
Sussex.....	64	27†	56	1	65	31			82	29	83	26	92	31										
<i>The Red Sandstone Plain.</i>																								
Bayonne.....	68	27	60	1	64	31	71	29	81	25†	86	29	94	31	98	22	93	8	84	8	72	9	65	5
Bergen Point.....	70	27	62	1	64	31	71	30	83	30	83	18†	93	13†	96	22	93	8	85	9	70	9	59	5
Boonton.....	63	27	52	1	66	31	76	30	82	28†	84	30	93	31	99	22	93	8	85	9	73	9	64	5
Elizabeth.....	72	27	61	1	69	31	74	30	85	28†	86	29	97	13	98	6	98	8	89	9				
Flemington.....	70	27	60	1	71	31	79	30	89	28	86	26	96	31	98	21†	94	8	88	9	73	9	66	5
Highwood.....	67	27	57	1	65	31	71	30	81	25	81	28†	91	8†	91	8	90	8	83	9	68	9	61	5
Jersey City.....	68	27	61	1	65	31	72	29	83	30	86	29	96	31	98	22	95	8	87	9	70	9	61	5
Lambertville.....	66	27†	61	1	65	26†	74	30	85	28	84	27	91	13†	95	21†	91	8	81	8	71	9	64	5
Little Falls.....	66	27	58	1					85	29	86	28	95	12†	95	6†	93	8	84	9	68	9	61	5
Newark.....	68	27	59	1	67	31	71	30	81	28†	84	28	95	31	96	21	92	8	86	9	70	9	63	5
New Brunswick.....	73	27	62	1	65	31	70	30	85	28	82	17†	93	12	96	21†	93	8	86	9			64	5
Palisades Park.....					62	30	71	29	81	25	84	28	94	31	95	22	94	8	86	9	70	9	63	5
Paterson.....	69	27	60	1	70	31	77	30	85	30	84	18†	95	13†	99	22	95	8	86	9	71	9	60	5
Plainfield.....	70	27	59	1	67	31	74	30	83	29	82	28†	93	13†	94	22†	92	8	86	9	72	9	65	5
Somerville.....	70	27	59	1	69	31	74	30	87	28	85	27	94	12†	100	22	94	8	87	9	72	9	66	5
South Orange.....	67	27	52	1	65	31	69	30	81	29	83	28	93	31	92	6†	89	8	81	9	66	9	61	5
New York, N. Y.....	66	27	61	1	63	31	69	30	77	29	82	28	93	31	94	22	89	8	84	9	69	9	62	5
<i>The Southern Interior.</i>																								
Bridgeton.....	73	27	60	1	70	31	79	21	90	28	87	18	95	12†	100	22	95	8	89	9	75	9	66	5
Burlington.....	70	27	62	1	68	31	78	30	88	28	85	27	94	12†	96	22	94	8	88	9	73	9	65	5
Clayton.....	70	27	61	1	69	26†			90	28	86	27	92	13†	99	22	95	8	90	9	74	9	68	5
Haddonfield.....	71	27																						
Hightstown.....	70	27	62	1	67	31	75	30	87	28	86	27	94	13	99	22	95	8	88	9	74	9	65	5
Indian Mills.....	73	27	63	1	67	31	70	16†	85	29	85	5†	92	8					90	9	75	9	70	5
Lakewood.....	72	27	63	1	68	26	84	21	90	28	86	29	94	12	100	22	95	8	85	9	71	9	67	5
	71	27	63	1	65	26	69	30	89	28	86	19	94	13	95	23	89	5†						
Moorestown.....	71	27	63	1	67	31	80	21	87	28	83	17†	92	13	94	22	92	8	85	9	74	9	67	5
Trenton.....	68	27	62	1	66	31	76	30	87	28	84	26	92	31	97	22	92	8	84	9	70	9	64	5
Tuckerton.....	72	27	60	1	60	13			85	11	87	18	92	12†	96	8	95	8	92	9	71	9	67	5
Vineland.....	71	27†	61	1	69	26†	85	21	90	28	84	19†	91	12†	97	22	92	8	89	9	73	9	67	5
Woodbine.....	68	28	62	1	64	26	80	21			85 ^c	18	92	13	97	22	90	8	86	8	72	9	62	4
Philadelphia, Pa.....	69	27	61	1	66	31	78	21	86	28	84	29	95	31	97	22	92	8	86	9	72	9	64	5
<i>The Sea Coast.</i>																								
Asbury Park.....	72	27	62	1	62	26	63	17†	83	30	82	18	92	12†	95	8	92	8	87	9	71	9	67	5
Atlantic City.....	68	28	56	1	59	13	64	14	84	11	78	20	91	31	91	12	89	8	77	9	67	2	60	5
Cape May City.....	65	28	53	1	62	13	67	29	82	2	81	29	88	31	95	22	90	8	82	9	68	2	61	5
Long Branch.....	74	27	63	1	65	31	70	30	80	25	84	18	94	31	95	8	92	8	85	9	71	9	67	5
Sandy Hook.....	63	27	60	1	58	31	63	29	79	30	82	29	90	13	92	8	90	8	84	9	68	9	60	5

† On other dates also.

Letters of alphabet denote number of days missing.

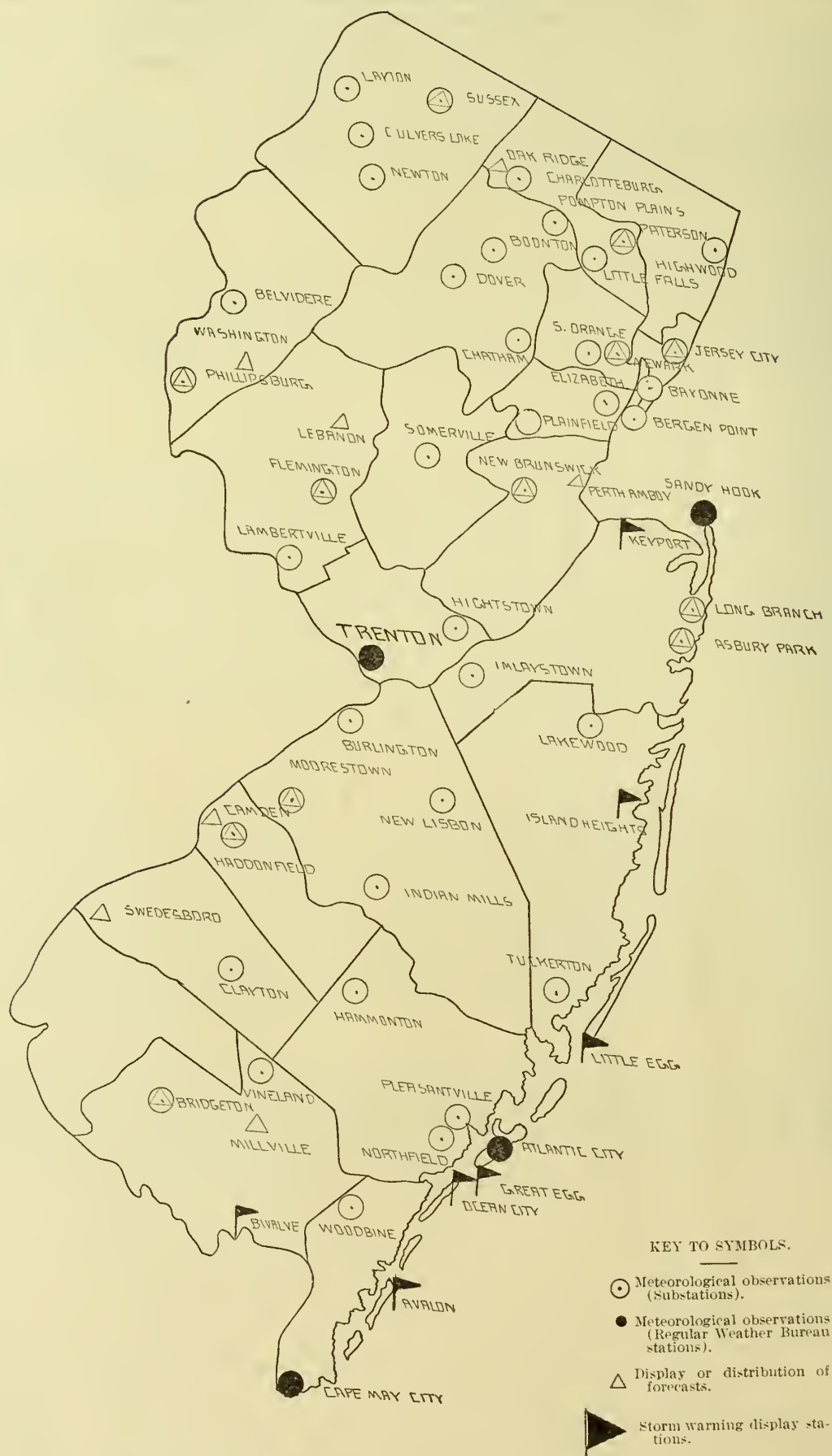
Monthly Minimum Temperatures for the Year 1916, with Dates.

STATIONS.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.	
	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.
<i>The Highlands and Kittatinny Valley.</i>																								
Belvidere.....	6	15†	-8	15	3	18	27	11	39	19†	43	1	52	1†	47	14	38	26	27	27	18	22		
Charlotteburg.....	2	15	-8	14†	-1	18	21	11	34	14	36	2	45	1	40	29	31	20	23	27	12	22†	4	18
Culvers Lake.....	-8	15	-16	15	-9	18	20	11	32	19	37	1	46	6	40	29	34	19	24	10	11	26	6	17
Dover.....	3	15	-7	14†	1	18	25	11	34	19	43	1†	50	1	45	29	38	30	26	27	15	22	0	20
Dayton.....	-1	15	-18	15	-7	18	24	11	33	19	38	1	47	1	43	15	34	26	24	18†	12	26	-8	18
Newton.....					-2	18	29	9†	39	19	43	1	51	6	46	29	40	17†	30	1†	18	22	6	17
Phillipsburg.....	7	15†	-5	15	4	18	31	8†	40	19	46	2	53	1	49	14†	39	20	30	18†	19	22	10	17†
Sussex.....	3	9†	-18	15	0	18	28	11	34	19	42	2	51	6										
<i>The Red Sandstone Plain.</i>																								
Bayonne.....	7	15	0	14†	6	18	32	9	42	1	50	1	58	1†	53	29								
Bergen Point.....	6	15	-1	14	5	18	31	9	39	18†	47	1	57*	29	50	29	34	26	26	11†	22	22†	10	18
Boonton.....	4	9	-9	15	4	12†	21	11	36	19	42	2	49	1	43	29	34	20†	26	15	12	26	2	18
Elizabeth.....	6	15	-8	15	4	18	29	11	37	19	47	1†	53	1	49	14	39	20†	29	18	18	22	1	18
Flemington.....	7	18	-10	15	5	18	32	8†	40	1†	45	1	55	6	49	29	39	26	29	27	17	22	6	18
Highwood.....	6	15	-12	15	4	18	28	11	34	19	43	1	52	1	45	29	38	26	27	18†	16	22	1	18
Jersey City.....	9	15	1	14†	7	18	32	9	43	19	52	10†	60	6	54	29	47	20†	38	18	25	26	15	17†
Lambertville.....	8	18	0	14	8	18	33	11	41	19	49	1	56	6	52	29	44	20†	34	15†	23	22	12	18
Little Falls.....			-2*	14	8	17	30	11	42	21	44	1	54	1†	48	29	40	26†	30	18†	19	26	9	18
Newark.....	6	15	-1	14	4	18	30	9	43	19	50	10	59	6†	55	29	41	30	37	1†	25	26	15	20
New Brunswick.....	6	18	-4	15	6	18	31	9	39	1	44	6	56	1†	49	29	41	20†	31	27	19	22	10	16†
Palisades Park.....				3	18	31	11	36	19	44	1	52	29	46	29	36	30	29	18†	18	22	6		
Paterson.....	7	15	-1	15	6	18	31	11	41	1†	49	1	53	30	50	29	42	20	33	18	23	22†	13	18†
Plainfield.....	7	15†	-3	15	5	18	28	11	37	19	46	1	54	1	48	29	38	26	30	15†	18	22	4	18
Quincyville.....	5	18	-10	15	7	18	24	11	35	19	43	1	52	6	45	14	34	26	25	27	12	22	-2	18
South Orange.....	7	15	-1	14	5	18	33	8†	41	1	49	1†	57	29	49	29	43	26	32	27	22	22	11	20
New York, N. Y.....	7	15	1	14	7	18	30	9	44	18	51	10	59	5	55	28	44	30	39	10	25	26	15	16
<i>The Southern Interior.</i>																								
Bridgeton.....	8	18	2	15	10	18	30	7	41	19	48	1	56	5†	51	14	40	20†	32	15†	20	22	4	18
Hurlington.....	7	18	1	14†	7	18	32	7†	43	19	49	1	57	6	52	29	42	20†	33	18†	22	26	12	18
Mayton.....	2	18	0	15	8	18	29	7†	39	10	44	2	53	6	47	14	35	26						
Madisonfield.....	4	18				18												28	28	15	18	22	3	18
Lightstown.....	4	18	-9	15	6	18	30	7	38	19	44	1	52	2	48	29	39	20†	28	18	16	22		
Maytown.....	-2	18	-5	15	0	18	27	7	36	19	43	1	54	6	48	14†	35	26					9	17
Indian Mills.....	0	18	-5	15	5	18	27	11	38	10†	45	1†	52	1†	44	14†	34	20†						
Lawwood.....	0	19	-4	15	6	18	27	7	36	10	43	1	52	29	43	29	35	20	27	11	14	22	-1	18
Moorestown.....	5	18	-1	15	8	18	32	7†	42	10†	48	1	57	5†	52	14†	42	20	32	18	20	22	11	18
Newton.....	7	18	0	14	6	18	32	9	42	19	50	1	58	6	53	29	41	30	36	1	24	26	12	16
Rockerton.....	4	9	-2	15	7	18	30	7†	38	10†	45	2	52	5	46	14	35	26	27	11†	16	26	2	18
Shelton.....	5	9†	-1	15	8	18	28	7	40	10	48	1	55	5†	49	14	38	20†	30	11	19	22	2	18
Woodbine.....	6	15†	0	15	8	18	30	8					54	30	50	29	38	20†	30					
Philadelphia, Pa.....	9	18	5	14	10	18	32	8	45	19	54	10	62	6	59	29	45	30	40	1	28	16	5	18†
<i>The Sea Coast.</i>																								
Asbury Park.....	6	18	4	15	7	18	32	9	43	19	51	1	58	6†	49	14	45	26	36	18	22	26	11	20
Atlantic City.....	10	15	4	15	9	18	33	7	45	19	52	1	60	5	54	14	45	30	40	22	25	26	14	16
Cape May City.....	12	15	5	14	13	18	36	9	47	10	50	1	59	6	56	29	44	30	39	18	29	16	16	16
Long Branch.....	3	18	0	14	6	18	29	9	44*	1†			59	5	52	14	43	20†	34	18	22	22†	11	19†
Sandy Hook.....	10	18	6	14	9	18	32	9	44	1	53	10	60	5	60	14	49	30	43	18	28	26	17	16

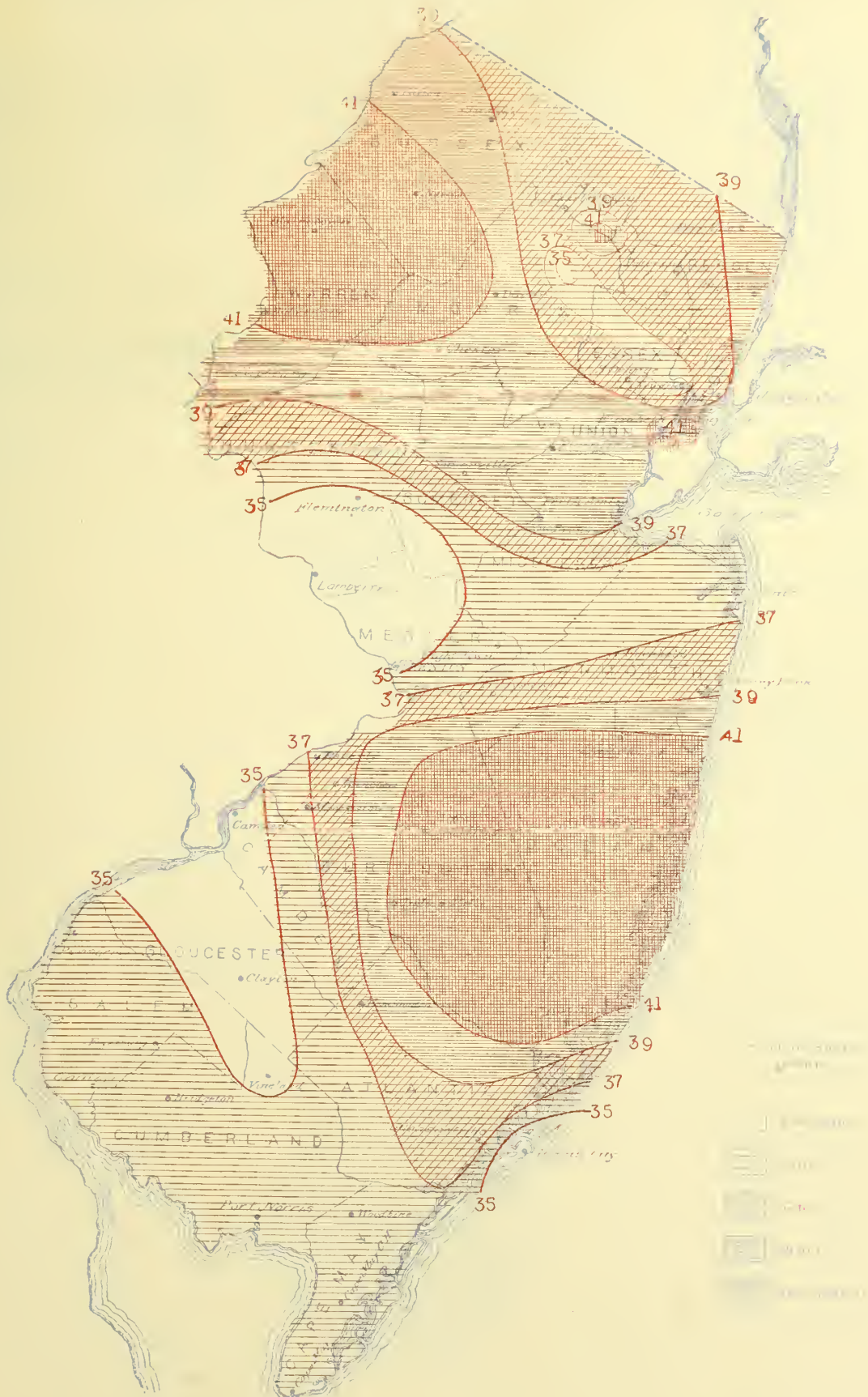
† On other dates also.

Letters of alphabet denote number of days missing.

OBSERVATION AND FORECAST DISPLAY STATIONS.



TOTAL PRECIPITATION FOR THE YEAR 1916



REGULAR, SPECIAL, AND COOPERATIVE STATIONS AND OBSERVERS.*

Stations.	Observers.	Stations.	Observers.	Stations.	Observers.
Asbury Park.....	Wilbur H. Pancoast.	Highwood.....	Charles J. Bates.	Plainfield.....	John Neagle.
Atlantic City.....	U. S. Weather Bureau.	Indlaystown.....	H. E. Bullock.	Pleasantville.....	Lincoln Van Gilder.
Belydere.....	Samuel J. Hixson.	Indian Mills.....	James M. Armstrong.	Pompton Plains.....	M. S. Taylor.
Bergen Point.....	Wm. H. Mitchell, D. D. S.	Jersey City.....	Samuel K. Pearson, Jr.	Sandy Hook.....	U. S. Weather Bureau.
Boonton.....	J. W. Demmers.	Lakewood.....	Richard W. Holman.	Somerville.....	A. A. Macdonald.
Bridgeton.....	Henry A. Jorden.	Lambertville.....	Samuel W. Cochran.	South Orange.....	Wm. J. Chandler, M. D.
Burlington.....	D. S. B. McCoy.	Layton.....	A. M. Depue.	Sussex.....	U. S. Weather Bureau.
Cape May City.....	U. S. Weather Bureau.	Little Falls.....	Montclair Water Co.	Trenton.....	Frank R. Austin.
Charlotteburg.....	George S. Briggs.	Long Branch.....	Wm. D. Martin, Jr.	Tuckerton.....	E. V. C. Hendrickes.
Chatham.....	Miss M. A. Butler.	Moorestown.....	Geo. L. Gillingham.	Vineland.....	Baron de Hirsch Agric'l School.
Clayton.....	George L. Wilson.	Newark.....	William Wiener.	Woodbine.....	
Culvers Lake.....	Brice E. Riker.	New Brunswick.....	N. J. Experiment Station.		
Dover.....	Wm. C. Harris.	Newton.....	Irrving G. Kern.		
Elizabeth.....	L. B. Bonnett.	Northfield.....	Wm. L. Flick.		
Flemington.....	Hiram E. Deats.	Palisades Park.....	George P. Kirsten.		
Hammonton.....		Paterson.....	Marion T. Probert.		
Hightstown.....	G. Franklin Elridge.	Phillipsburg.....	D. Wilson Smith.		

* At the end of the year, 1916.

FORECASTS, WARNINGS, AND DISTRIBUTING CENTERS.

WEATHER AND TEMPERATURE FLAGS.		SPECIAL WARNINGS.	
Stations	Displaymen	Place	Distributor
Asbury Park.....	Asbury Park Trust Co	Atlantic City.....	U. S. Weather Bureau
do.....	Asbury Park Publicity Bureau	Bordentown.....	Delaware & Atlantic Tel. & Tel. Co.
Atlantic City.....	Manager, Preston Building	Bridgeton.....	Henry A. Jorden
do. (in summer only).....	Seaside Yacht Club	Cape May City.....	U. S. Weather Bureau
Bridgeton.....	Henry A. Jorden	Freehold.....	J. A. Yar
Cape May City.....	U. S. Weather Bureau	Jersey City.....	Union Trust Co. of New Jersey
Island Heights (in summer only).....	Island Heights Yacht Club	Long Branch.....	William D. Martin
Jersey City.....	Union Trust Co. of New Jersey	Millville.....	Delaware & Atlantic Tel. & Tel. Co.
Long Branch (cold wave warnings).....	William D. Martin	Mount Holly.....	do.
Newark.....	Central High School	Newark.....	William Wiener
do.....	State Normal School	Paterson.....	Public Library
New Brunswick.....	National Bank of New Jersey	Pertin Amboy.....	do.
Princeton.....	First National Bank	Salem.....	Delaware & Atlantic Tel. & Tel. Co.
Trenton (cold wave warnings).....	U. S. Weather Bureau	Sandy Hook.....	U. S. Weather Bureau
		Somerville.....	Postmaster
		Trenton.....	do.

FORECAST DISTRIBUTING CENTERS.

Figures following the name of town indicate the number of forecast cards distributed daily, by mail, to points in New Jersey.

Atlantic City—241.....	U. S. Weather Bureau
Cape May City—50.....	do.
Matawan—192.....	Postmaster
Newark—184.....	William Wiener
New York, N. Y.—436.....	U. S. Weather Bureau
Oak Ridge—R. F. D. Service—104.....	Postmaster
Philadelphia, Pa.—170.....	U. S. Weather Bureau
Phillipsburg—83.....	Postmaster
Sandy Hook—20.....	U. S. Weather Bureau
Somerville—114.....	Postmaster
Trenton—346.....	U. S. Weather Bureau
Washington, N. J.—R. F. D. Service—65.....	Postmaster

FORECASTS BY TELEPHONE.

Forecasts are available each business day after 10:30 a. m. to all telephone stations within the State, in most instances without payment of toll. Special forecast distributors by telephone are:

Flemington.....	Hiram E. Deats
Hammonton.....	Hammonton Tel. & Tel. Co.
Lebanon.....	N. J. Telephone Co.
Paterson.....	Public Library
Perth Amboy.....	do.
Sussex.....	Farmers' Union Tel. Co.
Swedesboro.....	Peoples Rural Tel. Co.

WARNINGS OF FROSTS IN CRANBERRY MARSHES.	
Place	Distributor
Belle Plain.....	E. H. Dure
Bordentown.....	S. F. Garrisc
Collingswood.....	F. F. Colling
Cream Ridge.....	Isaac Harris
Hammonton.....	A. J. Ride
Jamesburg.....	John W. Vohma
Laurel Springs.....	Miss Sarah F. Colling
Mays Landing.....	C. D. Makepeace
Medford.....	Evans & Wil
New Lisbon.....	J. J. Whit
Pemberton.....	Theo. H. Bud
Toms River.....	Geo. H. Holma
Vincentown.....	Ethelbert Hain

STORM WARNING DISPLAY STATIONS.

Atlantic City	Great Egg	Long Branch
Avalon	Island Heights	Ocean City
Bivalve	Keyport	Sandy Hook
Cape May Point	Little Egg	

NJ
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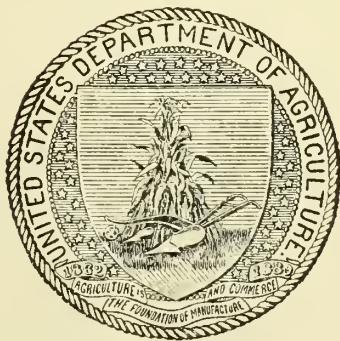
U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU
CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

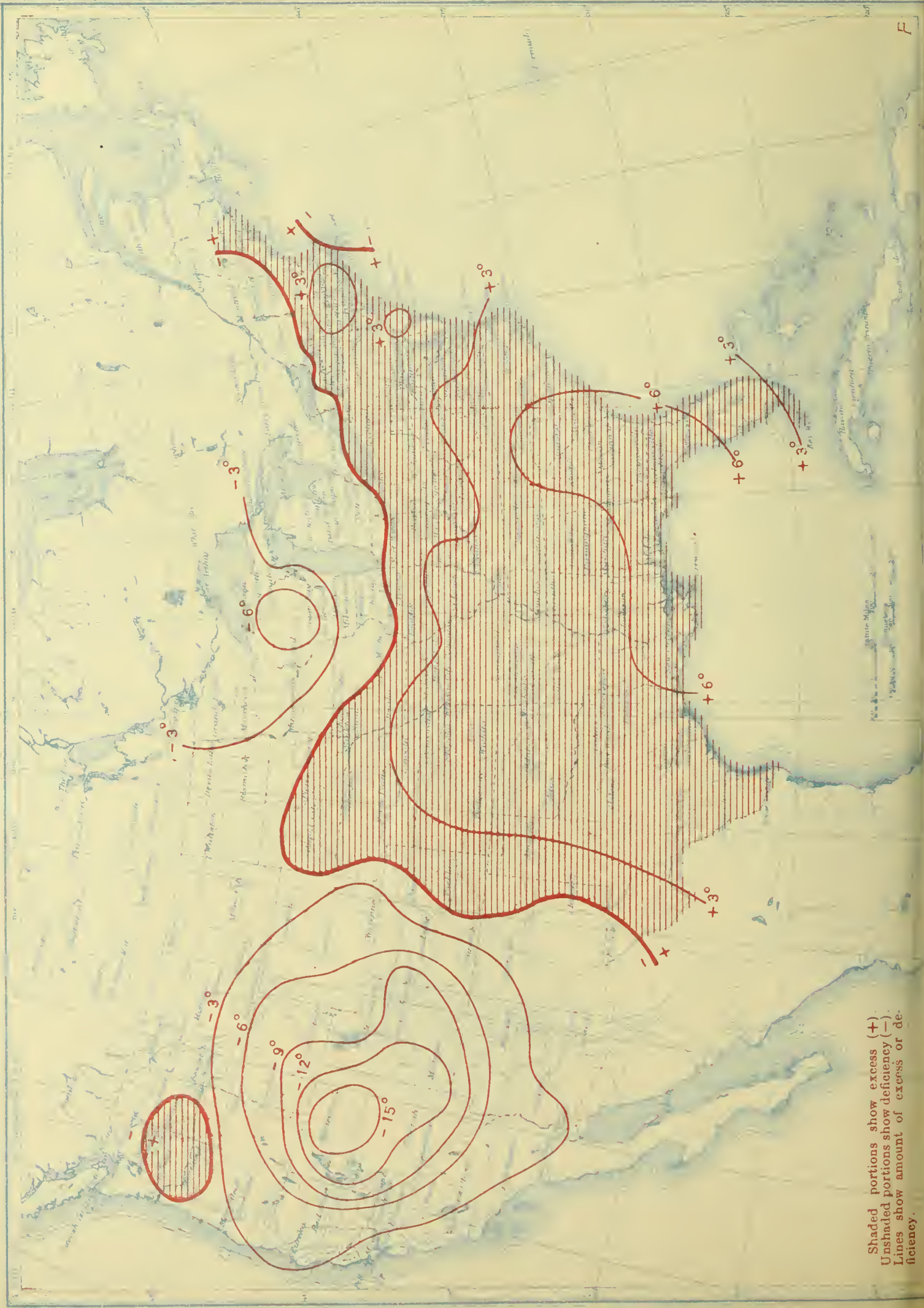
JANUARY, 1917.

BY
G. HAROLD NOYES
METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
FEBRUARY 24, 1917.

Departure of the Mean Temperature from the Normal, January, 1917.



Shaded portions show excess (+)
Unshaded portions show deficiency (-)
Lines show amount of excess or deficiency.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

VOL. XXX. TRENTON, N. J., JANUARY, 1917. No. 1.

GENERAL SUMMARY.

The months of January since 1912 have been somewhat warmer than normal, and January 1916 was the driest on record in New Jersey. This is naturally conducive to an erroneous idea that the mid-winter month is becoming less rigorous. Within the limit of historical records of mankind there is insufficient evidence to justify a claim of a material variation in seasonal conditions. The warmest January occurred in 1890 and the two coldest in 1893 and 1912. In 1917, January was an ordinarily typical winter month except for a slight deficiency of snow. Relatively frequent and regular alternations above and below normal temperature, tended to relieve the tension usually caused by steady cold, when temperatures remain many days in succession below freezing. And snow remained on the ground on consecutive days in appreciable amounts only during the greater portion of the third week in northern districts. Temperature ranges did not reach to wide extremes, and the character of the sky was nearly normal.

The principal days of precipitation were the 3d, 5th, 9th, 13th, 14th, 15th, 21st, 22d, 25th, 28th, 29th, 30th, and (except in the south) 31st. There were no snow storms averaging as deep as three inches, and most of them hardly over an inch; the principal dates of snow were: 15th, 18th, 21st, 25th and 28th. Cold waves occurred on the 11th, 15th, and 23d, and the coldest day of the month was the 12th, (the 11th in a few localities).

Winter wheat and other grains were mostly in fine condition at the close of the month, but the more damaging period of the winter for these crops, in northern counties is yet to come, particularly with the meagre snow covering afforded thus far. The ice harvest in northern sections was unusually fine, and in central counties, at the close of the month, cutting was still in progress, with excellent prospects.

Storm warnings were displayed along portions of the coast on the 3d, 5th, 7th, 10th, 14th, 17th, 18th, 21st, 22d, and 31st.

At Phillipsburg, the mean stage of the Delaware River was 3.5 feet. At Trenton the mean stage was 3.0 feet, which was 0.9 foot below normal; the highest stage was 4.9 feet on the 14th.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 38 stations was 31.4°, which was 1.5° above normal. The isotherm of freezing approximately bisected the State from west to east. The highest temperature for the month was 58° on the 22d at Atlantic City and Tuckerton, and the lowest, 6° below zero at Culvers Lake on the 12th. The greatest daily range of temperature was 38° on the 20th at Indian Mills and Tuckerton. Central interior stations were more nearly normal in temperature than other regions.

PRECIPITATION.

The average total precipitation of the State, as deduced from observations of 39 stations was 3.26 inches, which was 0.52 inch

below normal. The average depth of total snowfall (unmelted), from observations of 37 stations was 5.4 inches, which was 3.3 inches below normal. The greatest monthly amount of precipitation was 4.52 inches at Dover, and the least, 2.35 inches at Asbury Park. The greatest snowfall was 11 inches at Newton, and the least, 0.2 in. at Vineland. The greatest amount of precipitation in 24 consecutive hours was 1.88 inches at Burlington on the 21st-22d. The average number of days throughout the State on which 0.01 inch or more precipitation occurred was 13, which was 2 above normal.

WIND.

The prevailing wind direction for the month was from the northwest, with an approximate velocity of 14 miles per hour. The highest velocity, sustained for 5 consecutive minutes, was 73 miles per hour from the northwest at Long Branch on the 22nd. High winds were also reported on the 11th, 14th, and 19th.

SUNSHINE AND CLOUDINESS.

The average number of clear days throughout the State was 10, which was normal; partly cloudy, 8, which was 1 less than normal; cloudy, 13, which was 1 more than normal. The average per cent. of possible sunshine approximated 42, which was somewhat below normal.

MISCELLANEOUS.

Atmospheric pressure, reduced to sea level, was 30.04 inches, which was 0.07 inch below normal; highest readings occurred on the 15th, and lowest on the 10th. Sleet occurred in scattered portions of the State on the 1st, 21st, 22nd, 28th, 29th, 30th, and 31st. Dense fog occurred on the 3d, 4th, 5th, 6th, 22nd, 27th, 29th, 30th, and 31st. Lunar halos were observed on the 6th, 7th, and 8th; and solar halos, on the 23, 25th, and 27th. A thunder storm occurred on the 31st in northern counties.

COMPARATIVE DATA FOR JANUARY.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more prec.
1885.....	30.8	67	0	4.08	5.41	3.33	.....	.....	.....	.....
1886.....	27.3	60	-10	4.47	5.59	3.08	.....	.....	.....	.....
1887.....	28.4	67	-6	3.86	6.65	2.00	.....	.....	.....	.....
1888.....	25.4	59	-12	4.77	6.74	2.80	.....	.....	.....	.....
1889.....	36.2	60	8	5.68	8.78	3.84	.....	.....	.....	.....
1890.....	41.3	78	12	2.29	3.22	1.05	.....	.....	.....	.....
1891.....	34.2	59	10	6.57	10.55	4.41	10	11	10	10
1892.....	29.9	67	-6	5.13	7.05	2.50	10	9	12	10
1893.....	21.6	54	-21	3.04	4.56	1.87	10	10	11	9
1894.....	34.2	61	-4	2.34	3.80	1.18	10	8	13	11
1895.....	28.1	64	-4	4.66	5.80	2.48	10	10	11	11
1896.....	28.6	61	-7	1.66	2.81	0.68	12	10	9	5
1897.....	29.0	64	-6	2.80	4.21	1.70	11	8	12	9
1898.....	32.6	64	-10	4.20	5.90	2.79	9	11	11	11
1899.....	30.1	60	-21	4.01	5.73	2.40	13	8	10	11
1900.....	32.4	64	-5	3.85	5.50	2.37	11	11	9	10
1901.....	30.4	63	-6	2.52	4.00	1.35	11	11	9	10
1902.....	28.4	58	-5	3.28	4.35	2.52	12	9	10	10
1903.....	30.4	57	-5	3.90	5.04	2.31	10	10	11	10
1904.....	23.3	58	-34	3.09	4.67	1.34	13	7	11	10
1905.....	27.0	60	-16	4.18	7.13	2.68	12	9	10	9
1906.....	36.5	74	-5	2.85	3.86	2.08	11	9	11	11
1907.....	31.8	71	-19	3.50	5.80	1.93	8	9	14	14
1908.....	31.8	60	-6	3.74	5.22	2.29	12	11	8	9
1909.....	33.2	69	-12	3.18	4.13	2.18	8	9	14	12
1910.....	29.7	54	-15	5.04	6.65	3.66	8	8	15	15
1911.....	33.5	63	0	3.44	5.34	1.97	10	7	14	14
1912.....	22.3	58	-32	2.82	4.62	1.73	8	12	11	13
1913.....	35.9	68	10	3.58	4.71	2.63	11	7	13	14
1914.....	31.9	73	-18	3.85	6.15	1.95	9	8	14	9
1915.....	33.5	61	-5	6.55	8.92	4.40	11	6	14	12
1916.....	35.1	74	-8	<i>1.50</i>	2.96	0.92	11	8	12	11
1917.....	31.4	58	-6	3.26	4.52	2.35	10	8	13	13

Climatological data for January, 1917.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.							Precipitation, in inches.				No. of days.			Prevailing direction of wind.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation .01 in. or more.	Clear.	Pt. cloudy.			Cloudy.
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	26	28.7 ^a	+1.2	49	5	5	12	26	.....	.....	5.5	.....	15	1	15	.....	Samuel J. Hixson.	
Charlotteburg.....	Passaic.....	719	25	27.2	+0.1	50	14	2	12†	29	3.45	-0.91	1.45	.....	11	14	11	6	sw.	George S. Briggs.
Culvers Lake††.....	Sussex.....	848	16	.....	.....	.....	.....	-6	12	.....	3.46	+0.28	1.27	8.7	12	12	7	12	w.	Brice E. Riker.
Dover.....	Morris.....	600	33	26.9	+0.3	51	14	4	11†	31	4.52	+0.03	1.33	9.0	15	8	13	10	.....	William C. Harris.
Layton.....	Sussex.....	480	17	27.0	+3.0	51	14	0	27	32	3.66	+0.16	1.55	5.4	10	14	2	15	sw.	A. M. Depue.
Newton.....	Sussex.....	769	36	27.5	+1.8	51	14	2	12	35	3.40	-0.10	1.19	11.0	14	7	9	15	w.	Irving G. Kern.
Phillipsburg.....	Warren.....	363	35	30.3	+2.4	52	14	5	12	27	3.84	+0.19	1.08	6.7	14	13	5	13	w.	D. Wilson Smith.
Sussex.....	Sussex.....	442	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	George Dymock.
Means and extremes.....				2.79	+1.5	52	14	-6	12	35	3.72	-0.06	1.55	7.7	13	12	7	12	w.	
<i>The Red Sandstone Plain.</i>																				
Bergen Point††.....	Hudson.....	37	20	32.0	+1.8	52	14	7	12	30	3.08	-1.34	0.78	8.5	13	3	19	9	nw.	William H. Mitchell.
Boonton.....	Morris.....	400	\$27	27.4	.....	53	14	5	12†	.....	3.78	-0.42	0.92	4.3	11	12	4	15	sw.	J. W. Demmers.
Chatham.....	Morris.....	330	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Miss M. A. Butler.
Elizabeth.....	Union.....	45	38	31.3	+1.2	53	14	7	12	29	3.43	-0.67	1.12	7.5	12	10	9	12	nw.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	29	31.2	+1.6	53	14	7	12	30	3.71	+0.24	1.37	7.0	14	12	8	11	w.	Hiram E. Deats.
Highwood.....	Bergen.....	90	28	29.5	+0.6	50	14	7	12	31	2.53	-1.54	0.59	7.3	15	9	8	14	nw.	Charles J. Bates.
Jersey City.....	Hudson.....	10	18	32.7	+1.9	49	7†	8	12	30	2.79	-1.07	0.88	6.7	16	8	10	13	nw.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	30	33.4	+3.0	53	14	9	12	25	4.08	+0.34	1.40	6.9	11	10	11	10	nw.	Samuel W. Cochran.
Little Falls.....	Passaic.....	180	\$14	30.4	.....	53	14	9	11	36	3.31	-0.91	1.02	.....	13	17	2	12	w.	Montclair Water Co.
Newark.....	Essex.....	159	75	32.7	+3.1	52	14	9	12	29	2.92	-0.84	0.93	5.7	12	10	5	16	nw.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	110	64	32.0	+1.5	54	14	7	12	32	.....	.....	.....	7.5	13	12	5	14	sw.	N. J. Experiment Station.
Palisades Park.....	Bergen.....	80	2	29.6	.....	51	5†	7	12	33	2.90	.....	0.80	6.7	15	9	8	14	nw.	George P. Kirsten.
Paterson.....	Passaic.....	80	46	31.5	+2.1	50	14	7	12	24	2.89	-1.17	0.89	7.5	14	6	4	21	nw.	Marion T. Probert.
Plainfield.....	Union.....	100	31	31.0	+1.6	54	14	7	12	32	3.14	-0.75	1.16	6.8	14	7	9	15	nw.	John Neagle.
Pompton Plains.....	Morris.....	195	15	.....	.....	.....	.....	.....	.....	.....	3.77	-0.62	1.02	.....	11	.....	.....	.....	.....	M. S. Taylor
Somerville.....	Somerset.....	60	35	28.9	-0.3	53	14	5	12	31	3.07	-0.41	0.98	6.5	12	11	4	16	nw.	A. A. Macdonald.
South Orange.....	Essex.....	200	47	30.6	+1.9	52	14	7	12	35	3.60	-0.54	1.08	5.0	16	7	9	15	nw.	Dr. W. J. Chandler.
New York, N. Y.....		365	47	32.4	+2.2	52	5	7	12	27	2.44	-1.35	0.94	5.9	14	7	8	16	nw.	U. S. Weather Bureau.
Means and extremes.....				30.9	+1.7	54	14	5	12†	36	3.27	-0.69	1.40	6.7	13	9	8	14	nw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	36	34.1	+1.1	55	5†	10	12	26	3.26	-0.48	1.05	1.0	11	13	2	16	se.	Henry A. Jorden.
Burlington.....	Burlington.....	12	\$31	33.2	+2.4	54	5†	9	12	29	3.85	+0.31	1.88	5.7	12	16	4	11	nw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	25	33.2	+2.3	55	6	9	12	31	2.36	-1.40	1.00	2.0	13	11	9	11	.....	George L. Wilson.
Hammonton.....	Atlantic.....	103	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Frederick H. Hoeffler.
Hightstown.....	Mercer.....	120	25	32.0	+1.1	54	6	8	12	34	3.35	-0.34	1.01	6.0	14	11	11	9	.....	G. Franklin Eldridge.
Inlaystown.....	Monmouth.....	185	29	30.4 ^b	-1.3	55	14	4	12	36	.....	.....	1.30	.....	.....	18	2	11	w.	H. E. Bullock.
Indian Mills.....	Burlington.....	76	28	32.4	+1.0	56	14	6	12†	38	3.19	-0.51	1.08	4.3	11	9	10	12	nw	James M. Armstrong.
Lakewood.....	Ocean.....	54	14	31.8	-0.3	55	9	5	13	35	3.29	-0.49	1.58	4.5	13	8	6	17	sw.	R. W. Holman.
Moorestown.....	Burlington.....	75	55	33.8	+3.7	55	6†	9	12	29	2.97	-0.51	1.45	6.1	12	9	12	10	nw.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	10	.....	.....	.....	.....	.....	.....	.....	2.83	.....	0.61	0.8	11	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	19	.....	.....	.....	.....	.....	.....	.....	2.98	-0.42	0.98	.....	12	16	6	9	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	46	32.4	+1.9	55	14	8	12	32	3.10	-0.07	1.50	6.3	13	8	8	15	w.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	24	33.3	+1.6	58	22	8	12	38	3.13	-0.53	0.98	2.7	11	8	13	10	nw.	Frank R. Austin.
Vineland††.....	Cumberland.....	87	49	33.6 ^a	+1.6	56	22	10	12	30	2.77	-1.00	0.91	0.2	14	.....	.....	.....	.....	E. V. C. Hendricks.
Woodbine.....	Cape May.....	43	26	34.0	+1.6	56	6†	10	12	30	3.90	+0.25	0.78	0.5	13	9	9	13	sw.	Baron de Hirsch Agr. Sch.
Philadelphia, Pa.....		117	47	35.2	+3.4	56	5	12	12	31	1.90	-1.51	0.63	5.4	10	8	8	15	nw.	U. S. Weather Bureau.
Means and extremes.....				32.8	+1.4	58	22	4	12	38	3.15	-0.43	1.88	3.3	12	11	8	12	nw.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	28	32.2	+0.8	54	14†	7	12	30	2.35	-1.39	0.81	4.9	14	1	9	13	sw.	Wilbur H. Pancoast.
Atlantic City.....	Atlantic.....	16	44	35.2	+2.7	58	22	10	12	32	2.89	-0.51	0.72	0.3	11	7	6	18	nw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	33	34.8	+0.7	54	22	14	12	25	3.28	-0.09	0.87	1.6	12	8	7	16	nw.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	10	31.2	.....	57	14	6	12	35	3.38	.....	1.27	7.1	14	12	4	15	nw.	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	19	32.4	+2.7	50	14	10	12	26	2.78	-1.32	1.20	6.4	14	7	9	15	nw.	U. S. Weather Bureau.
Means and extremes.....				33.2	+1.7	58	22	6	12	35	2.94	-0.83	1.27	4.1	13	9	7	15	nw.	
For the State.....				31.4	+1.5	58	22	-6	12	38	3.26	-0.52	1.88	5.4	13	10	8	13	nw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

* Received too late to be included in the means.

Reference letters, a, b, etc., appearing in the table indicate number of days missing: for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Vineland is South Vineland.

Daily precipitation for January, 1917.

Stations.	Watershead.	Day of month.																															Total.		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
The Highlands and Kittatinny Valley.																																			
Belvidere	Delaware													*	1.04	.10							*	.94			.04			.14	.14		.15	§	
Charlotteburg	Passaic			.30		.26				T.	T.			*	1.45	.06							*	.87						.20	*	.31		3.45	
Culvers Lake	Delaware	T.	T.	.23		.74	.02			.01	T.			T.	1.27	T.	T.		T.			*	.10	.69			T.	.02	T.	.19	.05	.09	.05	3.46	
Dover	Passaic			.29		.70				.04				*	.70	.15							*	.95			.05		*	.18	*	1.33	.10	4.52	
Layton	Delaware			.26		.70	.07			T.	T.			T.	1.55	T.				T.	T.		.06	.65				.03		.20	.08	.06	T.	3.66	
Newton	Delaware			.22		1.19	.02			.02				.03	.91	.03	T.			.01			.06	.57			T.	T.	T.	.15	.10	.06	.03	3.40	
Phillipsburg	do.	T.		.33		.77				.05				.01	1.07	.08	.01		T.			.25	.82			.04	T.	.01	.09	.11	.20	T.	3.84		
Sussex	Hudson																																		
The Red Sandstone Plain.																																			
Bergen Point	Coast			.31		.45				.07				.02	.56	.09				.10			.25	.78			.10	T.	T.	.16	.03		.16	3.08	
Boonton	Passaic				.30	.12	.77				.04				.92	.20	.09			.02				.92			T.	T.		.13		.27		3.78	
Chatham ||	do.																																		
Elizabeth	Coast	T.		.32		*	.65			.05				T.	.58	.13						*	1.12												
Flemington	Raritan	T.		.22		.58	.04			.02	.05			T.	.63	.30							.30	1.07			.04	T.		.18	.31		T.	3.43	
Highwood	Hackensack	T.		.28		.52	.09			.05				.05	.54	.08							.17	.18			.03	T.	T.	.15	.19	.08	.04	2.53	
Jersey City**	Coast	T.		.26		.53				.05				*	.45	.07		*	.06				*	.88			.03	T.	*	.15	*	.29	.02	2.79	
Lambertville	Delaware	T.		.28		.43				.06				T.	1.09	.22							.18	1.22			.03	T.		.16	.09	.32		4.08	
Little Falls**	Passaic			.24		.61				.04				.16	.86	.12		T.	.03				.51	.28			.03	T.		.12	.12	.14	.02	2.89	
Newark**	Coast	T.		.10		.57				.01				.13	.47	.10				.10			.45	.48			.05	T.	.11	.31		.04		2.92	
New Brunswick	Raritan	T.		.21		.43	.01			.05	.02			T.	.63	.22	T.					.18	§			.06	T.			.15	.09	.17	T.	§	
Palisades Park	Hackensack	T.		.24		*	.62			*	.05			T.	.62	.09		.07	T.			*	.80			.03	T.	*		.16	*	.22	T.	2.90	
Paterson	Passaic			.21		.45				.05				.02	.87	.08		.02				.16	.62			.01	T.			.12	.12	.14	.02	2.89	
Plainfield**	Raritan	T.		.30		.15				.05				.36	.36	.20		.03				.60	.56			.05	T.			.05	.12	.27	.04	3.14	
Pompton Plains||	Passaic			.29		.06	.81			.06					.86	.16	.11					.86					T.	T.		.19		.31		3.77	
Somerville	Raritan			.19		.44	.01			.07					.61	.16						.15	.99							.19	.06	.11	.09	3.07	
South Orange	Rahway	T.		*	.32	.63	.06			.06				T.	.77	.05						*	1.08			.03	T.	*		.15	.29	.07	.01	3.60	
New York, N. Y***	Coast	T.		.24		.42				.07				.10	.06	.11		.05				.59	.35			.03	T.		.06	.09	.23	T.	.04	2.44	
The Southern Interior.																																			
Bridgeton	Coast			.68	.18	.12				.10				.15	.40	.05						.13	.92			.05					.48			3.26	
Burlington	Delaware	T.		.41		.31				.11				*	.64	.10						.30	1.58			.04					.11	.05	.20		3.85
Layton	Maurice			.51	.02	.19	.01			.06				.10		.01	T.					.08	.92			.03	T.			.10	.21	.12		2.36	
Lammonton	Mullica																																		
Lightstown	Raritan	.01		.25	.10	.21				.08				.03	.60	.16						.46	1.01			.04	T.		*	.32	.08			3.35	
Marlton	Delaware			.20		.18									.40							.20	1.30							*	.05			§	
Indian Mills	Mullica	T.		.40		.24	.10			.07				T.	.48		T.						.28	1.08		T.	.12				.12	.15	.15	T.	3.19
Lakewood	Metedeconk	T.		.26		.34	.09			.06				.02	.57	.08						.28	1.30			.03	T.	T.		.11	.07	.08		3.29	
Moorestown	Delaware			.40		.19	.01			.04	.02			*	.65	T.	.05					.18	1.27			T.				.10	.06			2.97	
Northfield	Coast			.52		.07	.22			T.					.59	T.	.02					.23	.61			.06				.32	.14	.05		2.83	
Pleasantville	Coast			.54		.11	.11			T.				.01	.58	.03						.50	.48			.07				.34	.16	.05		2.98	
Rehoboth***	Delaware	.01		.20	T.	.31				.05				.13	.32	.18		T.				1.01	.49			.04	T.		.01	.08	.27		T.	3.10	
Rockertown	Coast			.35		.27	.10								.74		.05					.12	.98			.13	T.			.24	.05	.10		3.13	
Shelton	Maurice	T.		.59	.02	.13	.02			.03				*	.43	T.	.03		T.			.21	.70			.06	T.			.22	.21	.12		2.77	
Woodbine	Coast			.78		.12	.25			.26	.08				.78		.06					.19	.55			.10				.38	.15	.20		3.90	
Philadelphia, Pa.	Coast	T.		.36	T.	.22				.08				.13	.10	.10						.63	T.			.05	T.			.10	.13		T.	1.90	
The Sea Coast.																																			
Asbury Park	Coast	T.		.18		.45				.04				.06	.32	.20						.77	.04			.02	T.		.01	.11	.11	.03	.01	2.35	
Atlantic City***	do.	T.		.49	T.	.42				.01				T.	.72	.03						.54	.18			.06	T.			.31	.12	.01		2.89	
Lape May City	do.	T.		.34	T.	.56	.31			.02				T.	.81	.07	T.					.35	.10			.11				.33	.20	.06	.02	3.28	
Long Branch**	do.	T.		.17		.50	.02			.06				.05	.66	.19						.71	.56			.03				.12	.26	.02	.03	3.38	
Mundy Hook***	do.	T.		.15		.39				.09				.06	.17	.17		T.	.01			.74	.46			.07	T.		.01	.28	.17	T.	.01	2.78	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours period, midnight to midnight. † Separate dates of falls not recorded.

|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.

* Precipitation included in the next following measurement. **Precipitation for 24-hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

Daily temperatures for January, 1917.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
<i>The Highlands and Kittatinny Valley.</i>																																	
Belvidere.....	Maximum...	31	39	40	48	49	39	46	43	41	42	30	21	32	43	33	....	32	35	30	40	34	44	32	32	30	28	25	45	38	....	39	36.6 ^b
	Minimum...	15	29	21	35	36	28	20	23	27	....	13	5	10	30	15	16	14	25	22	16	22	22	28	20	17	20	12	20	18	30	29	20.8
Charlotteburg.....	Maximum...	31	36	38	41	37	34	46	40	42	42	39	16	31	50	33	25	30	34	31	34	35	46	33	34	37	34	27	39	37	45	45	36.2
	Minimum...	8	29	13	37	24	30	....	20	30	32	9	2	2	26	13	12	13	24	20	11	17	24	13	7	26	8	6	18	10	33	29	18.2
Dover.....	Maximum...	31	37	40	42	38	45	45	47	41	42	26	18	38	51	22	27	31	35	30	35	30	45	29	32	38	28	24	42	37	45	39	25.8
	Minimum...	15	27	21	29	29	23	20	22	22	26	4	4	7	21	13	15	14	23	14	14	20	12	13	12	24	11	8	20	14	....	30	18.0
Layton.....	Maximum...	30	37	39	46	35	44	46	44	40	43	41	18	29	51	29	29	32	32	32	34	32	47	32	33	35	35	22	42	36	45	43	36.5
	Minimum...	12	30	18	35	29	30	15	18	28	30	9	3	4	28	13	13	8	14	20	12	21	21	9	10	21	8	0	18	10	33	20	17.4
Newton.....	Maximum...	28	36	39	41	39	44	44	44	45	42	41	17	30	51	26	29	29	34	31	34	31	45	30	31	36	30	22	41	36	43	39	35.7
	Minimum...	13	27	23	31	29	29	23	21	31	32	6	2	12	25	13	14	14	20	15	13	21	22	13	11	26	11	6	17	16	32	31	19.3
Phillipsburg.....	Maximum...	31	41	40	45	43	44	46	43	41	43	40	20	33	52	30	31	32	37	34	38	35	45	32	34	38	35	23	42	37	48	41	37.9
	Minimum...	17	28	24	37	35	32	25	24	29	33	13	5	12	30	15	18	16	26	22	16	24	27	16	18	29	16	11	21	20	33	31	22.7
Sussex.....	Maximum...																																
	Minimum...																																
<i>The Red Sandstone Plain.</i>																																	
Bergen Point.....	Maximum...	34	40	43	46	51	47	49	45	47	51	46	21	41	52	28	31	31	39	35	38	35	47	36	36	38	34	32	34	43	48	43	40.0
	Minimum...	18	30	26	29	34	32	29	26	31	32	16	7	13	26	17	18	14	26	29	18	29	25	23	24	29	16	16	....	26	31	31	24.0 ^a
Boonton§§.....	Maximum...	32	39	43	46	48	37	47	43	42	44	23	20	52	53	24	29	32	37	27	36	40	47	32	32	39	31	26	43	42	38	37	37.6
	Minimum...	8	20	21	26	27	32	17	19	25	30	13	5	5	18	15	12	7	18	23	12	16	25	13	12	14	10	7	12	15	27	26	17.1
Elizabeth.....	Maximum...	33	40	42	46	42	46	50	45	47	49	46	22	37	53	33	33	32	41	34	38	33	48	36	35	38	35	26	44	39	49	44	39.9
	Minimum...	17	32	25	34	32	32	23	25	29	31	17	7	11	33	17	16	11	24	23	14	21	29	17	18	31	14	11	22	21	36	30	22.7
Flemington.....	Maximum...	35	40	40	47	40	44	50	50	43	44	42	25	35	53	32	35	32	40	34	42	35	47	34	35	41	36	25	46	43	51	41	39.9
	Minimum...	15	29	23	35	33	34	23	25	30	32	15	7	10	32	17	18	11	25	24	12	25	29	13	18	30	16	12	23	19	35	29	22.5
Highwood.....	Maximum...	33	39	42	45	49	44	48	45	45	47	41	20	36	50	29	29	32	37	34	35	30	47	31	34	36	32	27	40	37	46	39	38.0
	Minimum...	16	32	24	30	34	29	23	32	31	10	7	9	26	16	11	10	25	16	16	16	29	16	16	30	13	10	22	19	31	28	21.0	
Jersey City.....	Maximum...	35	43	44	46	47	48	49	44	46	47	43	20	37	49	30	30	32	37	32	37	34	48	32	35	38	33	27	42	41	49	43	39.3
	Minimum...	21	34	34	38	38	35	32	28	33	35	13	8	16	30	19	20	18	25	22	20	27	32	20	23	30	20	15	23	30	35	35	26.1
Lambertville.....	Maximum...	34	41	44	45	48	50	50	48	47	47	42	25	38	53	33	32	30	40	38	43	42	48	35	40	36	31	43	41	47	42	41	41.1
	Minimum...	20	32	26	35	37	35	30	28	36	35	17	9	16	33	19	21	15	27	24	18	26	31	20	22	32	20	16	24	23	36	31	25.6
Little Falls.....	Maximum...	35	41	43	44	41	45	47	45	46	49	45	30	40	53	26	31	34	39	32	38	35	50	38	35	35	34	22	42	41	49	43	39.9
	Minimum...	19	27	25	31	31	26	22	25	32	....	9	10	16	22	16	16	16	29	17	19	18	16	24	16	15	12	12	23	21	33	30	20.9 ^a
Newark.....	Maximum...	35	41	44	48	49	49	49	46	48	51	30	22	47	52	27	31	34	38	29	38	37	50	32	35	39	31	26	44	42	49	43	39.9
	Minimum...	16	35	33	39	36	33	30	29	36	30	18	9	19	23	19	20	17	27	21	20	30	25	20	23	26	19	15	24	26	37	35	25.5
New Brunswick.....	Maximum...	34	40	44	45	52	53	48	44	47	50	47	20	40	54	33	28	29	38	34	41	39	49	34	35	39	38	26	42	40	47	42	40.4
	Minimum...	17	30	25	35	35	42	25	25	34	31	15	7	11	32	17	18	13	26	24	15	26	28	18	19	22	16	12	25	24	35	30	23.6
Palisades Park.....	Maximum...	34	39	43	46	51	40	48	45	45	48	30	20	44	51	25	31	33	38	31	37	35	48	30	35	38	32	27	44	39	47	40	38.5
	Minimum...	17	27	26	32	34	25	25	24	33	30	8	7	11	22	16	11	13	25	15	15	21	22	17	17	24	13	10	22	23	29	30	20.8
Paterson.....	Maximum...	34	40	41	46	42	42	48	45	45	45	42	21	36	50	35	32	33	40	33	35	32	51	36	35	40	37	29	45	40	49	42	39.4
	Minimum...	24	32	26	34	31	32	24	26	34	34	15	7	13	34	13	17	16	24	22	19	23	27	19	19	19	17	13	22	23	30	32	23.6
Plainfield.....	Maximum...	33	40	42	46	45	50	49	44	45	46	43	22	36	54	28	32	31	39	34	39	33	48	33	35	38	32	27	44	39	50	39	39.2
	Minimum...	18	31	25	34	34	32	26	29	31	11	7	11	28	17	18	12	25	20	14	24	33	18	18	18	13	15	12	22	22	34	29	22.7
Somerville.....	Maximum...	33	40	41	46	42	44	50	46	44	45	37	21	35	53	37	31	31	39	35	39	32	46	34	35	38	33	25	44	37	49	41	38.8
	Minimum...	10	26	19	29	31	33	19	23	26	29	14	5	6	30	15	14	3	23	15	9	18	27	15	14	22	11	8	20	14	34	26	19.0
South Orange.....	Maximum...	33	40	42	44	46	47	47	42	45	47	44	19	35	52	24	29	32	37	32	35	33	47	28	34	37	28	26	42	42	46	40	38.0
	Minimum...	18	32	28	35	31	26	24	32	33	9	7	12	24	17	19	12	15	26	20	17	25	29	18	18	18	17	13	22	24	36	33	23.1
New York, N. Y.....	Maximum...	35	43	44	47	52	47	47	43	47	49	33																					



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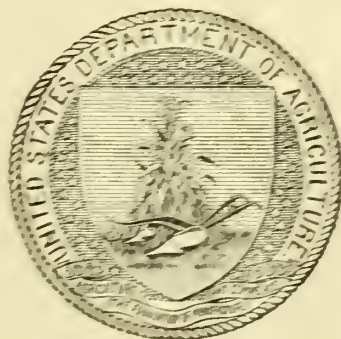
APR 5 1917

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

FEBRUARY, 1917.

BY
G. HAROLD NOYES
METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
MARCH 1917

Departure of the Mean Temperature from the Normal, February, 1917.



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

VOL. XXX. TRENTON, N. J., FEBRUARY, 1917. No. 2.

GENERAL SUMMARY.

In many respects New Jersey is one of the favored States of the north Atlantic coast as regards winter climate. Severe weather in February is to be expected, with occasional hard storms, impeding snow, and cold waves. But February, 1917, is to be recorded as a month of moderately pleasant weather, due principally to the deficient amount of rain and snow. Until after the middle of the month, it was steadily cold, with only one or two days above normal in temperature. On the 3d, 12th, and 13th the average temperature was approximately 20° subnormal. Zero to 17° below occurred on the 13th. The principal occurrences of snow were on the 5th, 15th-16th, 22d, and 28th, the last being the heaviest storm, but the greatest amount reported was but 7.5 inches (at Phillipsburg). Ponds and streams were frozen most of the month, and an excellent crop was harvested, except in southern districts.

With the ground bare most of the month, alternate freezing and thawing was bad for grain fields, but there was little damage to other vegetation. Days on which rain or snow fell were frequent, the principal dates being the 1st, 5th, 9th, 15th-16th, 19th, 20th, 22d, 23d, 24th, 27th, and 28th. There were cold waves on the 2d, 5th, and 10th, none of which were notably severe. The sun was obscured by cloudiness somewhat more than usual, as would be expected from the frequency of precipitation. The few occurrences of sleet were practically without result.

Storm warnings were displayed along the coast from the 1st to the 5th, 9th, 10th, 15th, 17th, 23d, and 26th.

At Phillipsburg the mean stage of the Delaware River was 2.0 feet, the highest reading being on the 24th. At Trenton the mean stage was 2.6 feet, which was 1.1 feet below normal, the highest reading being on the 25th.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 37 stations was 28.1°, which was 1.9° below normal. The highest temperature was 62° at Clayton on the 26th, and the lowest, 17° below zero at Culvers lake on the 13th. The highest monthly mean temperature was 32.3° at Woodbine, and the lowest, 23.2° at Charlotteburg. The greatest daily range of temperature was 38° at Somerville on the 17th. In the southern portions of the State, the mean maxima exceeded 40°, but in no case did they fall as low as freezing. As usually occurs, the temperatures were lower in the interior, between the Delaware and western water boundaries.

PRECIPITATION.

The average total precipitation of the State, as deduced from observations of 39 stations, was 1.95 inches, which was 1.91 inches below normal. The average total depth of snow (unmelted) was 8.3 inches, which was 1.9 inches below normal. The greatest monthly amount of precipitation was 2.80

at Cape May City, and the least, 0.92 inch at Layton. The greatest monthly snowfall was 13.7 inches, and the least, 0.5 inch at Woodbine. The greatest amount of precipitation in any 24 consecutive hours was 0.87 inch at Pleasantville on the 23d-24th. Every station was below normal in precipitation, the greatest deficiency being in north-central and south-central districts. The number of days on which 0.01 inch or more fell varied from 8 to 14 for the month, the average being 11, which was 2 more than normal.

WIND.

The prevailing wind direction was from the northwest, with an approximate velocity of 15 miles per hour. The highest velocity, sustained for 5 consecutive minutes, was 74 miles per hour from the northwest on the 5th, at Long Branch. High winds were also mentioned as having occurred on the 2d, 3d, 4th, 9th, and 10th.

SUNSHINE AND CLOUDINESS.

The average number of clear days throughout the State was 10, which was 1 less than normal; partly cloudy, 9, which was 1 more than normal; cloudy, 9, which was normal. The average percent. of possible sunshine approximated 51, and was somewhat less than normal.

MISCELLANEOUS.

Atmospheric pressure, reduced to sea level, averaged 29.99 inches, which was 0.11 inch below normal; highest readings occurred on the 13th, and lowest on the 5th. Thunder was heard on the night of January 31st-February 1st in northern counties, and on the 26th-27th; and in the south on the 22d. Sleet occurred in scattered localities on the 19th, 20th, and 22d. Dense fog occurred on the 1st, 9th, 20th, 26th, and 27th. A lunar halo was observed on the 4th; solar halos on the 6th, 13th, 15th, and 21st.

COMPARATIVE DATA FOR FEBRUARY.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more precip.
1885.....	23.9	54	-2	3.93	5.85	1.44	.....	.....	.....	.....
1886.....	28.9	64	-10	5.42	8.00	4.13	.....	.....	.....	.....
1887.....	33.9	69	6	5.24	6.74	4.13	.....	.....	13	13
1888.....	30.6	60	-5	3.53	6.01	2.04	.....	.....	9	8
1889.....	27.7	53	-3	2.49	3.80	1.65	.....	.....	9	8
1890.....	39.9	76	14	4.17	5.32	2.43	.....	.....	12	10
1891.....	38.0	71	1	5.11	7.20	3.70	6	9	13	14
1892.....	33.6	58	7	1.63	3.62	0.67	7	9	13	7
1893.....	30.1	63	-1	5.73	8.90	3.14	7	8	13	11
1894.....	29.7	62	-11	4.42	6.17	3.25	9	8	11	11
1895.....	23.6	57	-12	1.28	2.34	0.55	13	9	6	5
1896.....	32.1	62	-12	6.77	10.06	4.82	9	9	11	12
1897.....	32.5	59	-6	3.61	6.37	2.38	8	10	10	8
1898.....	32.7	65	-15	3.48	5.45	1.55	12	7	9	9
1899.....	25.8	60	-17	6.06	8.77	3.78	10	6	12	15
1900.....	31.0	69	-6	5.30	7.88	3.27	9	9	10	10
1901.....	25.4	52	-6	<i>0.94</i>	<i>1.65</i>	<i>0.69</i>	15	9	4	4
1902.....	27.4	62	-7	6.24	8.44	4.29	12	6	10	9
1903.....	33.7	70	-16	4.87	6.60	3.74	12	8	8	10
1904.....	24.8	65	-16	2.45	3.09	1.36	13	8	8	8
1905.....	23.4	53	-18	2.53	3.96	0.70	14	7	7	7
1906.....	30.9	64	-12	2.58	3.85	1.77	14	7	7	7
1907.....	23.6	55	-22	2.67	3.90	1.82	14	7	7	8
1908.....	28.1	65	-17	4.79	7.44	2.85	10	10	9	9
1909.....	37.8	72	-2	4.96	6.78	3.55	6	10	12	12
1910.....	30.5	69	-11	3.08	4.81	1.06	10	9	9	10
1911.....	30.9	67	-12	2.78	4.06	1.76	8	7	13	11
1912.....	27.7	61	-14	2.49	3.12	1.68	11	12	6	5
1913.....	30.6	70	-5	2.49	3.21	1.48	16	6	6	7
1914.....	25.9	67	-17	2.85	4.94	1.89	12	7	9	9
1915.....	35.7	75	2	5.37	7.28	2.97	11	6	11	8
1916.....	28.1	63	-18	4.21	6.17	2.84	10	6	13	11
1917.....	28.1	62	-17	1.95	2.80	1.18	10	9	9	11

Climatological data for February, 1917.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation of in. or more.	Clear.	Pt. cloudy.			Cloudy.
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	26	26.8	-0.6	52	27	-3	13	32	1.97	-2.69	0.54	8	14	6	8	.....	Samuel J. Hixson.	
Charlotteburg.....	Passaic.....	719	25	23.2 ^a	-3.1	48 ^a	18 [†]	-5	13	34	1.97	-2.69	0.54	8	16	11	1	nw.	George S. Briggs.	
Culvers Lake ^{††}	Sussex.....	848	16	24.4 ^b	-1.8	52	26 [†]	-4	13	33	1.18	-2.17	0.30	7.0	10	14	9	5	nw.	Brice E. Riker.
Dover.....	Morris.....	600	33	24.4 ^b	-1.8	52	26 [†]	-4	13	33	2.12	-2.12	0.46	11.0	10	12	10	6	.....	William C. Harris.
Layton.....	Sussex.....	480	17	24.0	-0.1	50	27	-7	13	31	0.92 [*]	-2.54 [*]	0.22 [*]	4.5 [*]	8 [*]	13	2	13	nw.	A. M. Depue.
Newton.....	Sussex.....	769	36	24.4	-1.3	52	27	-8	3	36	1.24	-2.59	0.35	8.5	11	7	2	19	nw.	Irving G. Kern.
Phillipsburg.....	Warren.....	363	35	27.3	-0.5	52	27	-2	13	29	1.79	-2.00	0.53	13.7	12	13	7	8	nw.	D. Wilson Smith.
Sussex.....	Sussex.....	442	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	George Dymock.	
Means and extremes.....				25.0	-1.2	52	26 [†]	-17	13	36	1.66	-2.31	0.54	10.0	10	13	7	8	nw.	
<i>The Red Sandstone Plain.</i>																				
Bergen Point ^{††}	Hudson.....	37	20	28.0	-2.4	52	27	-1	13	27	.....	.....	.....	.....	.....	.....	.....	.....	William H. Mitchell.	
Boonton.....	Morris.....	400	27	23.5	.....	52	27	-3	13	37	1.60	-2.61	0.43	6.3	11	16	6	4	nw.	J. W. Demmers.
Chatham.....	Morris.....	330	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Miss M. A. Butler.	
Elizabeth.....	Union.....	45	38	28.9	-1.5	55	27	-1	13	31	2.05	-2.21	0.49	11.0	8	7	12	9	nw.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	29	28.6	-1.9	53	26 [†]	0	13	33	1.70	-1.69	0.50	10.3	10	14	6	8	sw.	Hiram E. Deats.
Highwood.....	Bergen.....	90	28	26.2	-2.5	49	27	-2	13	30	1.58	-2.95	0.28	8.1	10	9	12	7	nw.	Charles J. Bates.
Jersey City.....	Hudson.....	10	18	28.9	-2.3	51	27	2	13	24	1.97	-1.97	0.42	12.9	13	7	13	8	nw.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	30	30.0	-0.4	53	26 [†]	1	13	29	1.57	-1.97	0.43	11.0	10	11	9	8	nw.	Samuel W. Cochran.
Little Falls.....	Passaic.....	180	14	26.8	.....	52	27	1	3 [†]	29	1.67	-2.62	0.43	.....	12	11	4	13	w.	Montclair Water Co.
Newark.....	Essex.....	159	75	27.9	-1.9	53	27	1	13	29	2.00	-1.68	0.49	10.1	14	11	5	12	nw.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	110	64	28.7	-2.6	56	27	-1	13	33	1.77	-1.92	0.37	10.5	9	11	9	8	w.	N. J. Experiment Station.
Palisades Park.....	Bergen.....	80	2	26.1	.....	50	27	-2	13	29	1.95	-2.18	0.58	12.7	12	9	12	7	nw.	George P. Kirsten.
Paterson.....	Passaic.....	80	46	28.4	-1.8	52	27	0	13	27	2.22	-2.18	0.70	.....	13	2	10	16	nw.	Marion T. Probert.
Plainfield.....	Union.....	100	31	28.0	-2.2	54	27	0	13	30	1.91	-2.00	0.45	12.0	8	8	10	10	nw.	John Neagle.
Pompton Plains.....	Morris.....	195	15	.....	.....	.....	.....	.....	.....	.....	2.03	-2.40	0.51	6.0	10	.....	.....	.....	nw.	M. S. Taylor
Somerville.....	Somerset.....	60	35	26.8	-3.2	53	26	-2	13	38	1.61	-1.94	0.37	10.6	10	11	10	7	nw.	A. A. Macdonald.
South Orange.....	Essex.....	200	47	27.4	-1.6	52	27	0	13	25	1.84	-2.18	0.58	8.0	10	12	9	7	w.	Dr. W. J. Chandler.
New York, N. Y.....		365	47	27.8	-2.9	55	27	0	13	29	1.70	-2.04	0.39	12.2	11	4	14	10	nw.	U. S. Weather Bureau.
Means and extremes.....				27.6	-2.0	56	27	-3	13	38	1.83	-2.17	0.70	10.0	11	9	10	9	nw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	36	31.6	-2.3	60	26 [†]	0	13	32	2.37	-1.73	0.65	4.5	11	18	3	7	w.	Henry A. Jorden.
Burlington.....	Burlington.....	12	31	30.0	-0.9	59	26	0	13	34	1.80	-1.94	0.71	.....	11	16	4	8	nw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	25	31.2	-0.5	62	26	0	13	33	1.85	-2.17	0.46	3.7	8	10	11	7	nw.	George L. Wilson.
Hammononton.....	Atlantic.....	103	15	.....	.....	57	26 [†]	-2	13	30	1.33	-2.41	0.35	.....	12	.....	.....	.....	nw.	Frederick H. Hoefler.
Hightstown.....	Mercer.....	120	25	.....	.....	57	26 [†]	-2	13	30	1.33	-2.41	0.35	.....	12	.....	.....	.....	nw.	G. Franklin Eldridge.
Inlaystown.....	Monmouth.....	185	29	27.7	-3.2	58	26 [†]	-4	13	35	1.80	-1.78	.....	.....	11	16	6	6	w.	H. E. Bullock.
Indian Mills.....	Burlington.....	76	28	29.8	-2.3	59	26	-3	13	34	2.65	-1.31	0.64	8.0	10	10	10	8	nw.	James M. Armstrong.
Lakewood.....	Ocean.....	54	14	28.6	-1.2	60	26	-1	13	35	1.99	-1.85	0.55	8.0	10	5	9	14	w.	R. W. Hofman.
Moorestown.....	Burlington.....	75	55	31.1	+0.1	61	26	0	13	32	1.84	-1.79	0.71	8.0	9	9	14	5	nw.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	10	.....	.....	.....	.....	.....	.....	.....	2.19	.....	0.45	3.5	11	.....	.....	.....	nw.	William L. Flick.
Pleasantville.....	Atlantic.....	26	19	.....	.....	.....	.....	.....	.....	.....	2.55	-0.41	0.87	.....	10	15	6	7	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	46	28.5	-2.2	59	26	0	13	29	1.47	-1.72	0.43	7.6	12	7	9	12	nw.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	24	30.4	-1.7	58	27	-2	13	32	2.20	-1.59	0.58	8.5	10	13	9	6	nw.	Frank R. Austin.
Vineland ^{††}	Cumberland.....	87	49	28.9 [†]	-3.6	59	27	1	13	28 [†]	1.87	-2.18	0.50	2.6	9	.....	.....	.....	nw.	E. V. C. Hendricks.
Woodbine.....	Cape May.....	43	26	32.3	-0.3	60	26	-1	13	31	2.66	-1.39	0.65	0.5	10	11	10	7	n.	Baron de Hirsch Agr. Sch.
Philadelphia, Pa.....		117	47	31.4	-1.4	60	26	3	13	29	2.20	-1.18	0.86	8.4	9	6	10	12	nw.	U. S. Weather Bureau.
Means and extremes.....				30.0	-1.6	62	26	-4	13	35	2.04	-1.71	0.87	5.5	10	12	8	8	nw.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	28	28.6	-3.3	59	26	-1	13	29	1.60	-2.23	0.40	9.7	12	8	10	10	w.	Wilbur H. Pancoast.
Atlantic City.....	Atlantic.....	16	44	30.4	-2.6	59	27	1	13	31	2.43	-0.84	0.58	6.2	13	4	14	10	nw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	33	31.2	-2.9	57	27	4	13	28	2.80	-0.49	0.70	1.6	12	8	10	10	nw.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	10	27.8	.....	60	26	0	13	33	2.27	.....	0.49	10.9	13	6	9	13	nw.	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	19	27.8	-2.9	52	26	4	13	27	2.57	-1.00	0.84	12.0	12	6	15	7	nw.	U. S. Weather Bureau.
Means and extremes.....				29.2	-2.9	60	26	-1	13	33	2.33	-1.14	0.84	8.1	12	6	12	10	nw.	
For the State.....				28.1	-1.9	62	26	-17	13	38	1.95	-1.91	0.87	8.3	11	10	9	9	nw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

* Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

†, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Vineland is South Vineland.

Daily precipitation for February, 1917.

Stations.	Watershead.	Day of month.																															Total.	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>The Highlands and Kittatinny Valley.</i>																																		
Belvidere.....	Delaware.....	.28				§				§							.06				.20		.24	.38			.03	.04	.22				§	
Charlotteburg.....	Passaic.....	.29				.54		T.		.23						.04	T.					.38	.36				.07	.04	.06				1.97	
Culvers Lake.....	Delaware.....	.20		T.		.11		T.		.15					T.	T.	.01				.14		.12	T.	.30		.07	.04	.04				1.18	
Dover.....	Passaic.....	.14				.40				.24						.05					.07	.30	*	.46			.11	.35					2.12	
Layton.....	Delaware.....	.21				.22		T.		.10					*	T.					.10		.04		.16		.04	.05	§				0.92	
Newton.....	Delaware.....	.16				.15		T.		.15						.04	T.			T.	.10		.14	.02	.33		.01	.07	.07				1.24	
Phillipsburg.....	do.....	.17		T.		.05		T.		.08						.02	.05				.11		.31	.07	.46		T.	.10	.36				1.79	
Sussex.....	Hudson.....																																	
<i>The Red Sandstone Plain.</i>																																		
Bergen Point.....	Coast.....	§				.10		T.		.12					T.	.06				T.	§		.41	.14				§	§				§	
Boonton.....	Passaic.....	.18	.05			.15	.07		T.	.08	.20				T.		.03	T.			.14		.22	T.	.43			§	T.				1.60	
Chatham II.....	do.....																																	
Elizabeth.....	Coast.....	.32		T.		.16		T.		.32					T.	.10	T.			T.	.15		.31		.49			T.	.20				2.05	
Flemington.....	Raritan.....	.03				.10				.14						T.	.13			T.	.11		.27	.08	.31		T.	.03	.50				1.70	
Highwood.....	Hackensack.....	.22				.28		T.		.20					T.	.05	T.			T.	.15		.25	.12	.15		T.	.04	.12				1.58	
Jersey City**.....	Coast.....	.13		T.	.04	.21		T.		.38				.01		* .10				*	.13		.33	*	.42		T.	T.	.22				1.97	
Lambertville.....	Delaware.....	.02				.12				.12						.04	.14				.12		.26	*			.32	.43					1.57	
Little Falls**.....	Passaic.....	.18			.02	.07		T.		.32					T.	.06	T.			.03	.12		.22	.09	.34		.06	T.	.16				1.67	
Newark**.....	Coast.....	.06	T.		.06	.20		T.		.28					.04	.07	T.			.01	.11		.22	.09	.40		.01	.02	.43				2.00	
New Brunswick.....	Raritan.....			T.		.20				.27					T.	* .15					.11		.29	T.	.37			.03	.35				1.77	
Palisades Park.....	Hackensack.....	.08				.25		T.		.33					T.	.09	T.			.06		.06	.27	*	.58		*	.04	.19				1.95	
Paterson.....	Passaic.....	.21				.36				.70					T.	*	* .03			*	.16		.24	.03	.31		T.	.05	.13				2.22	
Plainfield**.....	Raritan.....			T.	T.	.25		T.		.27					T.	.15	T.			T.	.04		.35	.21	.19		T.	.45					1.91	
Pompton Plains I.....	Passaic.....	.24				.08	.12			.08	.31				T.		.08	T.			.22		.28	T.	.51			.11					2.03	
Somerville.....	Raritan.....					.19				.22						.05	.11				.07		.25	*	.37			.07	.28				1.61	
South Orange.....	Railway.....	.08		T.		.09		T.		.34					T.	.06	T.			*	.16		.27	.14	.44		T.	T.	.26				1.84	
New York, N. Y***.....	Coast.....	.04		T.	.03	.21				.36					T.	.08	T.			.06	.03		.27	.14	.25		T.	T.	.23				1.70	
<i>The Southern Interior.</i>																																		
Bridgeton.....	Coast.....					.09				.28		T.				.30	.05			.10	.12		.13	.25	.20			.20	.65				2.37	
Burlington.....	Delaware.....	T.				.03				.19						.10	.07			*	.20		.19	.15	.16			*	.71				1.80	
Clayton.....	Maurice.....					.09				.11		T.				.16	T.				.46		.15	.25				.26	.37				1.85	
Hammonton.....	Mullica.....																																	
Hightstown.....	Raritan.....	.05				*				.21						.09	.02			.02	.04		.26	*	.26			.03	.35				1.33	
Imlaytown.....	Delaware.....	*				*				.30						.05	*				.40		.10	.10	.25			*	.60				1.80	
Indian Mills.....	Mullica.....	.07				.07				.36						.24	.08				.21		.20	T.	.64			.22	.56				2.65	
Lakewood.....	Metedeconk.....	.07				.08				.34						.19	T.			T.	.14		.22	.12	.21			.07	.55				1.99	
Moorestown.....	Delaware.....	.05				.04				.19						.13					.18		.17	.30			.07	.71					1.84	
Northfield.....	Coast.....	.02				.01				.39						.31	.05				.15		.08	.21	.45			.15	.37				2.19	
Pleasantville.....	Coast.....					.02			T.	.42						.20	.01				.25		.10	.40	.47			.22	.46				2.55	
Trenton***.....	Delaware.....	.02	T.			.05		T.	T.	.18						.09	.02			.06	.09		.24	.16	.10		T.	.05	.41				1.47	
Tuckerton.....	Coast.....					.08				.38			T.			*	.40			*	.21		.10	.58			*	.45					2.20	
Vineland.....	Maurice.....	.07		T.		T.				.26						.24	.03	T.			.16		.04	.21	*			.43	.50				1.87	
Woodbine.....	Coast.....	.06	T.			T.				.46						.37	.22				.16		.09	.15	.50			.15	.50				2.66	
Philadelphia, Pa.....	Coast.....	T.	T.			.06			T.	.13		T.				.33	T.				.01	.18		.24	.33			.08	.84				2.20	
<i>The Sea Coast.</i>																																		
Asbury Park.....	Coast.....	.01		T.	T.	.08			.02	.30					T.	.05	T.			T.	.04	.17		.22	.32	.08		.01	.30				1.60	
Atlantic City***.....	do.....	.02	T.	T.		.03			.10	.39		T.				.49	.01			T.	.01	.13		.12	.21	.37		.15	.40				2.43	
Cape May City.....	do.....	.15				.10			.06	.57		T.				.58	.03				.19		.06	.14	.70			.06	.16				2.80	
Long Branch**.....	do.....	.07		T.	T.	.06			.02	.40					T.	.12	.05			.03	.30		.35	.20	.29			.02	.36				2.27	
Sandy Hook***.....	do.....	.03				.30				.29					T.	.01	.23	T.		.04	.09		.45	.16	.12			.01	.84				2.57	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station: precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded.

|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.

* Precipitation included in the next following measurement. ** Precipitation for 24-hour period from midnight to midnight.

T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.			Moisture.		Sun- shine.	
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	Percentage of possible sunshine.
							Miles per hour.	Direction.	Date.			
Atlantic City.....	30.02	30.57	13	29.25	5	9	30	nw.	5	73	68	52
Cape May City.....	30.03	30.58	12	29.39	4		11	38	nw	5		
Long Branch.....	29.99	30.56	13	29.14	5	21	74	w.	5	70	51	52
Newark.....							48	w	5	*68	58†	50
New York, N. Y.....	29.97	30.54	13	29.12	5	21	70	nw.	5	73	68	53
Palisades Park.....	29.96	30.52	13	29.15	5							
Philadelphia, Pa.....	30.02	30.60	13	29.23	5	12	40	nw.	9	72	69	50
Sandy Hook.....	29.97	30.56	13	29.10	5	19	60	w.	5	78	70	52
Trenton.....	29.98	30.55	13	29.25	5	14	53	nw.	9	73	64	49

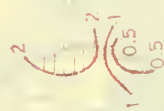
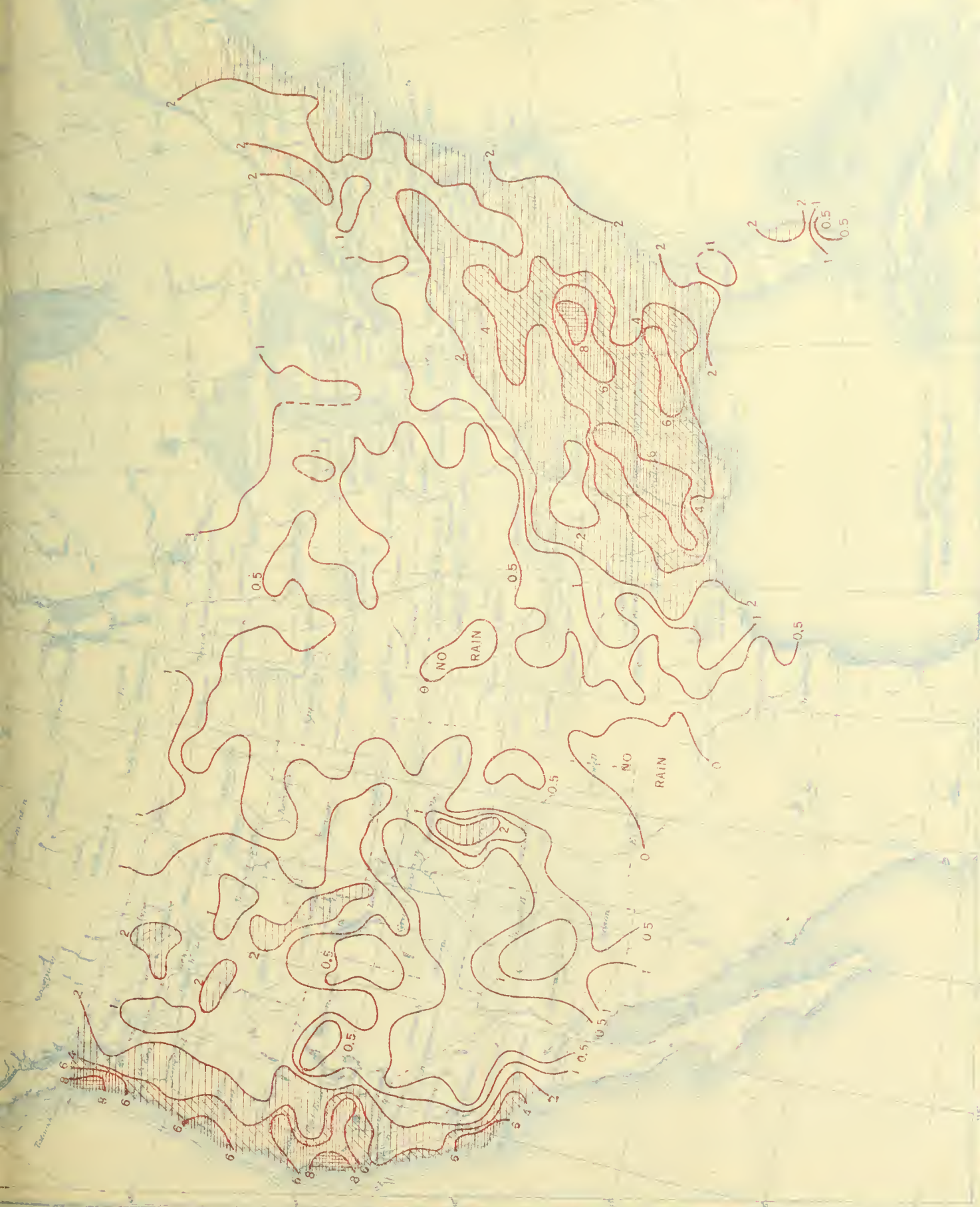
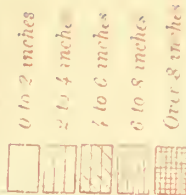
§ Two directions and dates

* 7 a. m. † 9 p. m. ‡ 5 p. m

Daily temperatures for February, 1917.

Stations.		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean
The Highlands and Kittatinny Valley.																																	
Belvidere.....	Maximum...	44	28	15	34	31	29	36	45	38	21	22	16	26	36	30	35	44	51	38	45	40	42	38	49	39	45	52	42	.....	.....	36.1	
	Minimum...	28	12	3	9	9	11	14	25	18	6	8	1	-3	16	13	16	12	30	24	25	21	22	25	30	18	28	27	31	.....	.....	17.5	
Charlotteburg.....	Maximum...	37	30	13	30	30	24	33	43	38	18	17	14	24	33	32	34	33	48	36	46	31	34	41	41	36	48	.....	.....	.....	.....	32.7	
	Minimum...	30	8	1	9	8	8	14	27	17	3	-1	-4	-5	4	5	16	10	...	20	22	19	15	7	35	13	22	37	28	.....	.....	13.6	
Dover.....	Maximum...	45	22	12	...	28	26	33	42	...	...	19	12	25	34	30	33	39	45	26	46	34	36	43	44	33	52	37	26	.....	.....	3.39*	
	Minimum...	22	7	2	11	6	9	14	27	...	4	4	-2	-4	15	11	16	15	26	22	23	20	18	10	28	15	24	36	24	.....	.....	1.49*	
Layton.....	Maximum...	45	33	11	31	30	...	32	43	39	17	17	11	23	33	26	36	40	42	33	47	39	36	42	42	36	45	50	36	.....	.....	33.9*	
	Minimum...	31	9	2	10	8	10	5	19	17	2	-1	-3	-7	10	7	15	9	28	20	22	20	18	11	34	14	24	33	29	.....	.....	1.41	
Newton.....	Maximum...	44	31	13	30	31	24	32	41	39	17	17	11	20	31	28	31	39	44	32	44	42	35	41	44	43	47	52	39	.....	.....	33.3	
	Minimum...	30	6	-8	8	-5	4	12	26	15	...	5	-4	-5	15	18	17	18	31	18	23	18	19	15	34	13	23	37	26	.....	.....	15.1*	
Phillipsburg.....	Maximum...	43	33	14	34	33	25	36	44	40	21	20	15	23	35	32	34	45	50	38	45	42	40	45	48	37	51	52	45	.....	.....	36.4	
	Minimum...	33	12	2	12	6	9	16	26	19	7	12	1	-2	18	15	20	17	30	24	26	22	23	16	33	19	28	37	28	.....	.....	18.2	
Sussex.....	Maximum...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Minimum...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
The Red Sandstone Plain.																																	
Bergen Point.....	Maximum...	48	35	15	35	31	30	38	48	43	23	24	18	26	57	35	36	36	48	34	42	36	38	44	48	38	46	52	41	.....	.....	36.6	
	Minimum...	31	14	4	13	16	10	14	26	16	14	11	2	-1	17	20	25	29	24	24	28	24	24	21	24	20	26	39	28	.....	.....	19.4	
Boonton§§.....	Maximum...	47	13	15	36	16	28	33	43	39	19	20	12	-4	35	33	34	41	47	34	45	35	39	45	45	35	50	52	34	.....	.....	33.9	
	Minimum...	30	10	3	3	11	8	10	16	19	5	4	0	-3	1	12	10	10	20	22	23	21	18	11	12	16	13	30	31	.....	.....	13.1	
Elizabeth.....	Maximum...	48	47	15	39	35	31	40	48	44	22	24	17	27	38	32	36	43	52	40	45	40	42	48	50	42	44	55	44	.....	.....	38.9	
	Minimum...	34	14	5	13	10	11	14	24	21	9	10	2	-1	19	17	15	15	28	25	29	24	25	17	37	20	26	36	30	.....	.....	18.9	
Flemington.....	Maximum...	46	35	20	35	35	28	36	47	45	25	24	23	26	38	32	36	44	50	49	48	41	40	48	50	41	53	53	45	.....	.....	39.0	
	Minimum...	33	14	5	14	7	10	12	22	22	9	8	3	0	19	14	17	9	28	27	28	24	23	16	35	21	28	35	29	.....	.....	18.3	
Highwood.....	Maximum...	46	34	15	35	35	29	34	43	37	20	22	14	25	34	30	35	38	47	32	41	38	37	43	45	34	44	49	40	.....	.....	34.9	
	Minimum...	33	10	5	13	12	10	13	22	18	8	8	1	-2	19	16	13	15	26	22	27	22	13	32	19	26	36	28	.....	.....	17.4		
Jersey City.....	Maximum...	47	35	16	37	34	29	36	46	43	24	23	14	24	36	35	34	38	49	47	44	44	42	48	48	53	43	53	53	.....	.....	38.9	
	Minimum...	35	14	6	13	11	11	18	28	19	9	14	4	2	20	24	22	24	35	26	30	25	25	26	38	21	28	40	81	.....	.....	21.4	
Lambertville.....	Maximum...	44	36	20	35	34	25	36	47	44	25	24	21	25	36	35	36	43	48	49	47	44	44	42	48	48	53	43	53	.....	.....	38.9	
	Minimum...	35	16	5	15	7	10	15	28	25	10	14	5	1	21	18	21	14	28	29	32	27	27	22	37	25	31	39	32	.....	.....	21.0	
Little Falls.....	Maximum...	50	23	17	36	33	28	37	47	38	21	22	14	25	35	36	38	43	48	34	48	35	40	45	48	35	47	52	40	.....	.....	36.2	
	Minimum...	23	8	1	9	14	13	18	20	12	6	7	3	1	19	15	16	18	28	26	30	23	24	16	30	19	29	35	26	.....	.....	17.5	
Newark.....	Maximum...	48	19	14	36	30	28	37	46	41	21	21	12	25	36	33	35	40	49	35	46	36	38	45	47	33	52	53	40	.....	.....	35.6	
	Minimum...	23	9	6	14	12	12	18	29	12	8	8	5	1	18	24	22	25	32	25	33	26	24	26	33	21	28	40	81	.....	.....	20.2	
New Brunswick.....	Maximum...	45	36	16	36	37	26	37	48	42	22	23	13	25	35	36	34	42	49	46	42	41	44	46	50	45	54	56	46	.....	.....	38.3	
	Minimum...	33	13	4	9	6	10	16	27	22	9	13	3	-1	17	19	16	31	24	28	24	25	18	37	20	21	42	29	.....	.....	19.1		
Palisades Park.....	Maximum...	47	18	15	36	31	29	35	45	40	22	23	15	27	36	31	35	40	49	34	45	37	40	43	47	34	46	50	35	.....	.....	35.2	
	Minimum...	18	6	5	13	11	10	16	26	11	8	7	2	-2	18	19	15	17	29	23	28	23	21	17	30	19	26	35	24	.....	.....	17.0	
Paterson.....	Maximum...	49	38	16	36	35	31	36	46	42	23	24	15	26	36	33	37	43	51	44	44	40	40	45	49	39	42	52	44	.....	.....	37.7	
	Minimum...	33	13	6	11	12	11	17	24	22	8	12	3	0	9	19	19	20	29	23	26	24	23	19	37	19	26	37	30	.....	.....	19.0	
Plainfield.....	Maximum...	47	33	15	38	33	30	37	47	38	23	24	11	25	37	33	35	45	50	36	44	38	41	48	49	36	46	54	43	.....	.....	37.0	
	Minimum...	33	13	5	12	8	11	13	23	20	9	11	3	0	18	18	16	15	29	25	29	24	25	19	34	20	26	39	30	.....	.....	18.9	
Somerville.....	Maximum...	46	31	16	35	32	28	34	48	35	23	24	17	25	36	34	35	45	49	42	43	42	39	47	49	45	53	52	46	.....	.....	37.5	
	Minimum...	28	12	3	12	6	9	12	16	21	8	5	1	-2	17	12	11	7	23	24	27	22	20	13	34	19	25	35	28	.....	.....	16.0	
South Orange.....	Maximum...	46	31	14	35	33	27	35	45	39	21	21	12	24	35	34	34	41	48	32	45	36	38	45	46	36	47	52	41	.....	.....	35.5	
	Minimum...	31	10	5	12	10	11	16	26	15	8	10	3	0	18	20	19	20	32	25	31	24	24	20	36	19	26	41	31	.....	.....	19.4	
New York, N. Y.....	Maximum...	49	23	26	35	35	30	36	48	40	24	24	15	24	36	36	35	40	48	34	42	37	38	43	47	33	54	55	39	.....	.....	36.3	
	Minimum...	23	9	5	14	12	12	19	31	11	8	7	3	0	18	22	23	24	29	24	31	24	23	27	30	19	30						

Scale of Shades.



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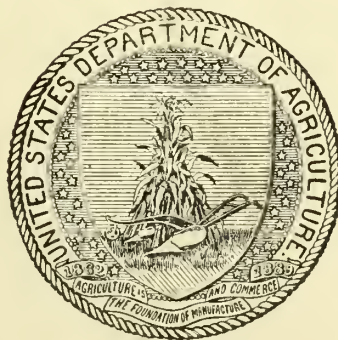
U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU
CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

MARCH, 1917.

BY
G. HAROLD NOYES
METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
APRIL 19, 1917.

Departure of the Mean Temperature from the Normal, March, 1917.



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

VOL. XXX. TRENTON, N. J., MARCH, 1917. No. 3

GENERAL SUMMARY.

The usual blustery weather of March in this region was less pronounced in 1917, than in most other years, and except for general snow storms of considerable depth from the 2d to the 5th, the month would have gone on record as more than ordinarily pleasant. From the 8th to the 12th, and from the 21st to the close of the month, temperatures were consecutively above normal, and the only sustained cold weather was the first week, when temperatures were but slightly below normal. It was the warmest and wettest March since 1913, but was still almost 10° cooler than the record-breaking March of 1903. Even with considerably more snow than the March normal, it proved to be a great contrast with the heavy snow of the same month a year ago. Snow practically disappeared about the 7th in southern sections, and about the 12th in northern counties, which was ten days to two weeks earlier than last year. Temperatures from December to March inclusive have averaged but a fraction of a degree below normal, and precipitation in January, February and March was nearly two inches deficient. The precipitation deficit is reflected in the low stages of streams which are unusually low for the Spring of the year.

The mean daily stage of the Delaware River at Phillipsburg was 5.2 feet; the highest being 14.8 feet at 5 p. m., on the 29th. At Trenton, the mean daily river stage was 3.5 feet, which was 0.4 foot below normal, the highest being 9.2 feet on the 29th.

Storm warnings were displayed along the coast on the 4th, 5th, 7th, 10th, 14th, 17th, 18th, 23d, 27th and 28th.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from the mean of 37 stations was 38.2°, which was 0.3° above normal. The highest temperature was 72° at Burlington and Moorestown on the 31st, and the lowest, zero, at Layton on the 7th. The warmest station was Bridgeton, with a mean temperature of 41.9°, and the coolest, Charlotteburg, 33.0°. The greatest daily range of temperature was 46° at Somerville on the 31st. The gradient in temperature from northern and northeastern regions to south and southwestern was fairly regular, the exception being a warm area in the lower Passaic watershed, which is a normally constant variation. Temperature variations above or below normal were mostly but a fraction of a degree.

PRECIPITATION.

The average total precipitation of the State, as deduced from observations of 39 stations was 4.65 inches, which was 0.58 inch above normal. The average total depth of snow (unmelted) was 9.8 inches, which was 3.9 inches above normal. The greatest monthly amount of precipitation was 7.14 inches at Northfield, and the least, 2.28 inches at Newton. The greatest monthly snowfall was 16.3 inches at Highwood, and the least, 0.7 inch at Northfield. The greatest amount of precipitation in any 24 consecutive hours was 2.04 inches at Atlantic City on the 4th-5th. Precipitation was deficient in northwestern counties, and

in excess of normal throughout central and southern districts. The number of days on which 0.01 inch or more precipitation occurred averaged 13, which was 2 more than normal.

WIND.

The prevailing wind direction was from the northwest, with an approximate velocity of 15 miles per hour, which was the same as last year. The highest velocity, sustained for 5 consecutive minutes was 72 miles per hour from the northwest on the 19th, at Long Branch. High winds were also reported on the 4th, 5th, 6th, 12th, 17th, 18th, 27th, 29th.

SUNSHINE AND CLOUDINESS.

The average number of clear days throughout the State was 12, which was 1 more than normal; partly cloudy, 8, which was 1 less than normal; cloudy, 11, which was normal. The average percent. of possible sunshine approximated 56, which was near normal, and the same as last March.

MISCELLANEOUS.

Atmospheric pressure, reduced to sea level, averaged 30.09 inches, which was 0.08 inch above normal. Highest readings occurred on the 7th, and the lowest on the 5th and 27th. Sleet occurred in some portions of the State on the 2d, 3d, 4th, 5th, 14th, 21st and 27th; that of the 14th was general practically throughout the State. Dense fog occurred on the 1st, 8th, 14th, 17th and 27th. Thunder was heard with the storms of the 11th and 27th. Lunar halos were observed on the 1st and 2d; and solar halos on the 13th and 23d.

COMPARATIVE DATA FOR MARCH.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more prec.
1885.....	30.4	66	2	1.10	2.29	0.23	.....	.....	.....	.....
1886.....	37.7	70	9	3.70	5.27	2.59	.....	.....	.....	.....
1887.....	37.7	61	8	3.34	5.45	2.19	.....	.....	.....	.....
1888.....	32.8	72	0	5.71	8.22	3.75	.....	.....	.....	.....
1889.....	40.5	67	19	3.79	6.49	1.98	.....	.....	.....	.....
1890.....	37.6	78	0	6.08	7.92	4.14	.....	.....	.....	.....
1891.....	37.2	68	4	5.06	8.02	2.05	.....	.....	.....	.....
1892.....	34.4	64	6	4.75	7.21	3.11	10	12	9	.....
1893.....	37.0	68	6	3.73	6.26	2.36	10	10	11	.....
1894.....	44.2	83	12	1.77	2.65	1.09	12	11	8	.....
1895.....	36.7	72	7	3.16	4.66	1.77	12	8	11	.....
1896.....	34.0	69	-8	5.34	7.38	3.14	13	8	10	.....
1897.....	40.0	77	18	2.78	4.32	1.55	11	9	11	.....
1898.....	45.1	77	16	3.33	4.25	2.56	9	10	12	.....
1899.....	38.6	73	3	6.54	9.58	3.45	7	10	14	.....
1900.....	35.6	67	-9	3.51	4.96	2.48	12	12	7	.....
1901.....	39.2	75	-8	4.64	8.07	2.40	9	10	12	.....
1902.....	43.9	77	0	4.34	7.20	3.16	12	10	9	.....
1903.....	47.6	79	13	5.13	8.53	3.60	11	8	12	.....
1904.....	37.2	72	1	3.43	4.76	2.02	11	8	12	.....
1905.....	39.8	87	-7	3.95	5.06	2.80	14	8	9	.....
1906.....	34.4	62	-15	5.09	6.77	2.91	10	9	12	.....
1907.....	41.2	88	-11	3.04	4.38	1.81	13	10	8	.....
1908.....	41.8	89	-7	2.80	4.92	1.06	11	9	11	.....
1909.....	38.3	74	-6	3.48	4.66	2.31	12	10	9	.....
1910.....	44.5	88	10	1.22	2.36	0.29	14	10	7	.....
1911.....	37.6	76	3	3.38	4.50	2.64	10	12	9	.....
1912.....	36.9	72	3	7.61	9.61	5.95	9	11	11	.....
1913.....	44.8	79	-1	5.15	7.73	2.47	10	9	12	.....
1914.....	35.4	75	-6	3.65	6.45	2.02	13	10	8	.....
1915.....	36.1	63	6	1.13	1.65	0.58	20	7	4	.....
1916.....	31.7	71	-9	3.48	4.96	2.38	13	8	10	.....
1917.....	38.2	72	0	4.65	7.14	2.28	12	8	11	.....

ERRATA.

ANNUAL 1915.—Comparative annual data for the State, 1886 mean temperature 50.2°, should read 51.0°.

JANUARY, 1916.—Greatest daily range at Charlottsburg 22°, should read 27°; at Trenton, 50°, should read 30°. Greatest precipitation in 24 hours at Highwood 0.06, should read 0.56. Mean temperature at Sandy Hook on the 21st, 36°, should read 35°. Mean minimum temperature at Burlington, 23.0°, should read 28.0°.

FEBRUARY, 1916.—Precipitation at Cape May City on the 13th, 0.28, should read 0.23; monthly total 4.00, should read 3.95; departure from normal +0.61 should read +0.56.

Climatological data for March, 1917.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation .01 in. or more.	Clear.	Pt. cloudy.			Cloudy.
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	26	37.4 ^b	+0.6	68	31	6	7	41	3.48	-0.56	0.85	6.0	11	15	4	12	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	25	33.0	-1.7	60	31	3	7	39	4.91	+0.97	.....	12.0	14	10	14	7	w.	George S. Briggs.
Culvers Lake†.....	Sussex.....	848	16	.....	.....	.....	.....	.....	.....	.....	2.99	-0.44	0.90	16.0	12	6	5	0	w.	Brice E. Riker.
Dover.....	Morris.....	600	33	35.0	+0.1	66	31	5	7	41	4.74	+0.84	.....	12.5	13	4	16	11	.....	William C. Harris.
Layton.....	Sussex.....	480	17	34.8	+0.6	57	26	0	7	39	3.57	-0.10	0.83	16.0	12	12	7	12	w.	A. M. Depue.
Newton.....	Sussex.....	769	36	35.1	-0.7	64	31	11	7	32	2.28	-1.32	0.53	10.0	10	10	9	12	nw.	Irving G. Kern.
Phillipsburg.....	Warren.....	363	35	38.0	+0.1	68	31	8	7	38	4.09	+0.44	0.81	10.4	15	14	6	11	w.	D. Wilson Smith.
Sussex.....	Sussex.....	442	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Means and extremes.....				35.6	-0.2	68	31	0	7	41	3.72	-0.02	0.90	11.8	12	11	9	11	w.	
<i>The Red Sandstone Plain.</i>																				
Bergen Point†.....	Hudson.....	37	20	37.8 ^b	0.0	63	31	16	7	34	4.45	+0.23	0.97	15.5	12	5	17	9	nw.	William H. Mitchell.
Boonton.....	Morris.....	400	27	35.4	.....	62	31	5	7	36	4.17	+0.43	1.28	13.0	15	18	4	9	nw.	J. W. Demmers.
Chatham.....	Morris.....	330	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Miss M. A. Butler.
Elizabeth.....	Union.....	45	38	38.5	+0.1	69	31	11	7	41	4.53	+0.27	.....	11.0	11	11	8	12	nw.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	29	38.8	+1.3	69	31	7	7	39	3.90	+0.29	0.66	9.5	13	17	4	10	w.	Hiram E. Deats.
Highwood.....	Bergen.....	90	28	36.0	-0.2	61	31	8	7	35	4.02	-0.13	0.91	16.3	12	9	11	11	nw.	Charles J. Bates.
Jersey City.....	Hudson.....	10	18	39.0	+0.8	64	31	19	6	28	4.76	+0.66	1.10	14.3	11	8	12	12	nw.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	30	40.6	+1.6	68	31	14	7	33	4.55	+0.44	0.94	11.0	12	12	10	9	nw.	Samuel W. Cochran.
Little Falls.....	Passaic.....	180	14	37.3	.....	64	31	11	7	36	4.02	+0.03	1.10	16.1	12	18	4	9	w.	Montclair Water Co.
Newark.....	Essex.....	159	75	39.0	+1.5	64	31	18	6	32	3.52	-0.41	0.90	12.8	12	14	4	13	nw.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	110	64	38.4	+0.2	69	31	17	6	37	3.87	-0.04	1.18	11.0	12	12	9	10	w.	N. J. Experiment Station.
Palisades Park.....	Bergen.....	80	2	36.5	.....	61	31	12	7	35	4.05	.....	.....	15.0	12	14	5	12	nw.	George P. Kirsten.
Paterson.....	Passaic.....	80	46	39.0	+0.5	64	31	17	7	33	4.24	+0.01	0.85	8.5	10	4	11	16	nw.	Marion T. Probert.
Plainfield.....	Union.....	100	31	38.4	+1.8	69	31	11	7	40	4.06	+0.25	0.67	11.9	12	8	11	12	sw.	John Neagle.
Pompton Plains.....	Morris.....	195	15	.....	.....	.....	.....	.....	.....	.....	4.55	+0.51	1.02	18.0	13	.....	.....	.....	.....	M. S. Taylor
Somerville.....	Somerset.....	60	35	36.4	-0.5	70	31	3	7	46	4.25	+0.30	0.72	8.5	12	14	5	12	nw.	A. A. Maedonald.
South Orange.....	Essex.....	200	47	37.7	+0.9	66	31	15	7	34	4.48	+0.67	1.00	11.0	14	14	6	11	nw.	Dr. W. J. Chandler.
New York, N. Y.....		365	47	38.7	+1.2	64	31	18	6	30	3.38	-0.72	0.98	11.4	13	9	7	15	nw.	U. S. Weather Bureau.
Means and extremes.....				37.9	+0.7	70	31	3	7	46	4.21	+0.23	1.28	12.7	12	12	8	11	nw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	36	41.9	+0.8	70	31	20	6	36	6.48	+2.01	1.70	2.0	11	20	1	10	sw.	Henry A. Jorden.
Burlington.....	Burlington.....	12	31	39.6	-0.3	72	31	11	7	38	4.84	+0.76	1.00	7.0	14	20	2	9	nw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	25	40.4	+0.6	70	31	18	6	39	5.00	+1.02	1.10	1.8	14	12	7	12	nw.	George L. Wilson.
Hammononton.....	Atlantic.....	103	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	G. H. Parkhurst.
Hightstown.....	Mercer.....	120	25	39.2 ^b	+0.2	70	31	16	6	34	4.95	+0.59	0.95	.....	14	13	8	10	.....	G. Franklin Eldridge.
Imlaystown.....	Monmouth.....	185	29	39.6 [†]	-0.1	70	31	.....	.....	41	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. E. Bullock.
Indian Mills.....	Burlington.....	76	28	39.0	-0.8	70	31	12	7	40	6.11	+2.01	1.11	5.5	15	13	8	10	nw.	James M. Armstrong.
Lakewood.....	Ocean.....	54	14	37.8	-2.2	69	31	11	7	43	5.78	+1.35	1.15	8.0	10	12	5	14	ne.	R. W. Holman.
Moorestown.....	Burlington.....	75	55	40.7	+1.9	72	31	17	7	38	5.10	+1.29	0.99	8.0	13	13	10	8	nw.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	10	.....	.....	.....	.....	.....	.....	.....	7.14	.....	1.32	0.7	13	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	19	.....	.....	.....	.....	.....	.....	.....	4.68	+1.44	0.93	.....	14	17	4	10	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	46	39.2	+0.1	69	31	18	6	32	3.45	-0.59	0.81	7.0	12	11	9	11	w.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	24	39.2	+0.2	62	11	12	7	39	6.86	+2.47	1.19	3.0	13	13	9	9	nw.	Frank R. Austin.
Vineland.....	Cumberland.....	109	49	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	T.	.....	13	9	9	w.	H. C. Himes.
Woodbine.....	Cape May.....	43	26	41.1	+1.0	70	31	19	7	36	.....	.....	.....	.....	.....	.....	.....	.....	.....	Baron de Hirsch Agr. Sch.
Philadelphia, Pa.....		117	47	42.0	+2.0	69	31	22	6	28	5.46	+2.01	1.43	9.6	13	11	10	10	nw.	U. S. Weather Bureau.
Means and extremes.....				39.8	+0.1	72	31	11	7	43	5.49	+1.24	1.70	4.3	13	14	7	10	nw.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	28	38.0	-0.3	60	31	18	6	35	4.29	-0.01	1.04	13.4	11	16	7	8	ne.	Wilbur H. Pancoast.
Atlantic City.....	Atlantic.....	16	44	40.0	+1.2	62	12	22	6	30	6.93	+3.20	2.04	1.1	13	8	13	10	nw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	33	40.2	-0.6	58	12	24	6	23	6.96	+3.23	1.69	2.4	17	10	11	10	nw.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	10	37.1	.....	65	31	17	6	39	5.81	.....	1.17	15.1	15	12	9	10	w.	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	19	37.8	+1.1	60	31	20	6	28	3.54	-1.24	0.85	9.8	12	10	9	12	w.	U. S. Weather Bureau.
Means and extremes.....				38.6	+0.4	65	31	17	6	39	5.51	+1.30	2.04	8.4	14	11	10	10	nw.	
For the State.....				38.2	+0.3	72	31	0	7	46	4.65	+0.58	2.04	9.8	13	12	8	11	nw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

* Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne.

Daily precipitation for March, 1917.

Stations.	Watershead.	Day of month.																															Total.	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>The Highlands and Kittatinny Valley.</i>																																		
Belvidere.....	Delaware.....			.17	.85				*						.55		.38					.24		*	.48			*	.81				3.18	
Charlotteburg.....	Passaic.....		*	.20	*	1.62		*	.54			*			.37	.01		.22				.05	*	.38				*	.05				4.91	
Culvers Lake.....	Delaware.....		T.	.15	.45	.90			.12			.09			.06			.22				T.	.03	T.	.22				.25	.18	T.	T.	2.99	
Dover.....	Passaic.....		*	.15	*	1.70			.45						.06			.43				.09	*	.40				*	1.24				4.74	
Layton.....	Delaware.....			.17	.51	.83	T.		.09					.11	T.	.51	.02		.21	T.			T.	.09		.29			.59	.15		T.	3.57	
Newton.....	Delaware.....			.11	.35	.53	T.		.18				.08		.12	T.		.22	T.	T.		T.	T.		.20			.36	.13	T.	T.		2.28	
Phillipsburg.....	do.....		.01	.24	.59	.66			.42				.05		.24	.01		.46				.17	.05	T.	.47			.42	.28	T.		.02	4.09	
Sussex.....	Hudson.....																																	
<i>The Red Sandstone Plain.</i>																																		
Bergen Point.....	Coast.....		.03	.45	.97	.59			.53			*			.16		.45	T.				.24			.40			*	.63				4.45	
Boonton [1].....	Passaic.....		.16	.18	.27	.76	.03		.38	.01		T.	.05		.03	.20	.01	T.	.51	T.			.03		.27			T.	1.28	T.	T.		4.17	
Chatham [1].....	do.....																																	
Elizabeth.....	Coast.....			.18	*	1.70			.59						.15		.65	T.				.35			.30			*	.57	T.				4.53
Flemington.....	Raritan.....		.02	T.	.29	.55	.11		.66				.07		.23		.61	T.				.11		T.	.62			.40	.21	.02				3.90
Highwood.....	Hackensack.....		T.	.24	.91	.66			.12				.07		.41	.04		.32	T.			.02	T.	T.	.40			.78	.05	T.				4.02
Jersey City**.....	Coast.....		*	.35	.62	1.10			.57				.03		.35		.60	T.				.16	*	.33				.64		.01				4.76
Lambertville.....	Delaware.....			.24	.72	.32			.34				.07		.34		.72	T.				.18	.19		.49			.85	.09					4.55
Little Falls**.....	Passaic.....		.12	.14	1.10	.20			.43				.05		.40		.42					.04		.10	.25			.77	T.					4.02
Newark**.....	Coast.....		.20	.10	.90	.05			.42				.02		.30		.66					.05		.01	.32			.49		T.	T.			3.52
New Brunswick.....	Raritan.....			.23	1.18	.09			.50	T.			.09		.18	.01	.49	T.				.17			.42			.37	.14	T.				3.87
Palisades Park.....	Hackensack.....			.30	*	1.32			.54				.07		.18	T.	.52	T.				*	.09		.38			*	.65					4.05
Paterson.....	Passaic.....			.18	.85	.70			.42				.05		.52	T.	.40					T.			.37			.65	.10	T.				4.24
Plainfield**.....	Raritan.....		.35	.15	.60	.25			.65				.04		.04		.67	T.				.27		.10	.34			.60		T.				4.06
Pompton Plains [1].....	Passaic.....		.11	.21	.32	1.02	.06		.39				.15		.05	.54		.51					.04		.34			.81						4.55
Somerville.....	Raritan.....			.30	.72	.41			.54			*			.12		.59					.28	.06		.68			.32	.23					4.25
South Orange.....	Rahway.....		.04	.30	1.00	.53			.56				.04		.17	.02	.62	T.				.15	*	.41			.48	.16	T.					4.48
New York, N. Y***.....	Coast.....		.20	.09	.91	.38			.45				.04		.31	T.	.28	T.				.13	.03	.01	.29			.26		T.		T.		3.38
<i>The Southern Interior.</i>																																		
Bridgeton.....	Coast.....		.35	.60	1.70	.60			.75				.02		.20		.55					.15		.71				.85	T.					6.48
Burlington.....	Delaware.....		*	.48	1.00	.75			.43				.05		.26	T.	.49	T.				.28	.10	*	.55			.35	.40					4.84
Clayton.....	Maurice.....		.09	.05	.21	1.10	.72		.53				.02		.25		.50	T.				.19	.02		.66			.61	.05	T.				5.00
Hammonton.....	Mullica.....																																	
Hightstown.....	Raritan.....		.02	.40	.95	.76			.45				.06		.25		.48	.01				.23	.16		.54			.48	.16					4.95
Imlaystown.....	Delaware.....														.30		.25					.25	.15	T.	.60			.25						\$
Indian Mills.....	Mullica.....		.20	.07	.88	1.11	.66		.64				.07		.40		.44	.01				.21	.09	T.	.57			.50	.26	T.				6.11
Lakewood.....	Metedeconk.....		T.	T.	.62	1.15	1.00		.73				.05		.18		.47	T.				.41	T.	.53			.64		T.					5.78
Moorestown.....	Delaware.....		.06	T.	.55	.99	.81		.35				.04		.34		.58					.25	.17		.53			.30	.13					5.10
Northfield.....	Coast.....		.07	.03	.84	1.32	.95		1.04						.30		.58					.09	.07		.75			1.01	.09					7.14
Pleasantville.....	Coast.....		.05	.17	.65	.65	.16		.93						.14		.28	T.	T.			.18	.02	.05	.52			.82	.06					4.68
Trenton***.....	Delaware.....		T.	.34	.06	.81	.12		.44				.05		.28		.36	T.				.30		.12	.33			.24		T.				3.45
Tuckerton.....	Coast.....		.15	.10	.70	1.19	1.18		.99				.02		.28		.50					.12		T.	.75			.80		.08				6.86
Vineland.....	Maurice.....																																	
Woodbine.....	Coast.....		.20	.05	.90	1.30	.87		.98				T.		\$		.62	T.				.15	.07		.90			1.15	.07	.05				\$
Philadelphia, Pa.....	Coast.....		.10	.40	.40	1.43	.15		.41				.04		.30		.73	T.				.41		.18	.28			.63		T.		T.		5.46
<i>The Sea Coast.</i>																																		
Asbury Park.....	Coast.....		.12	.55	1.04	.47			.20			T.			.17		.37	T.				.45		.06	.30			.56						4.29
Atlantic City***.....	do.....		.11	.60	.37	1.89	.53		.95				.01		.33		.49	T.				.18		.12	.69			.66		T.				4.29
Cape May City.....	do.....		.28	.12	.72	1.69	.35		.80				.05		.22	.01	.67	T.				.15	.02	.11	.72			.94	.10	.01				6.93
Long Branch**.....	do.....			.36	.24	1.17	.98		.26				.26		.30	.02	.59	T.				.46	.03	.05	.39			.69	.01					6.96
Sandy Hook***.....	do.....		.30	.27	.84	.48			.11				.06		.18		.31	T.				.32		.02	.23			.42	T.	T.				5.81

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded.

‡ Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.

* Precipitation included in the next following measurement. ** Precipitation for 24-hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

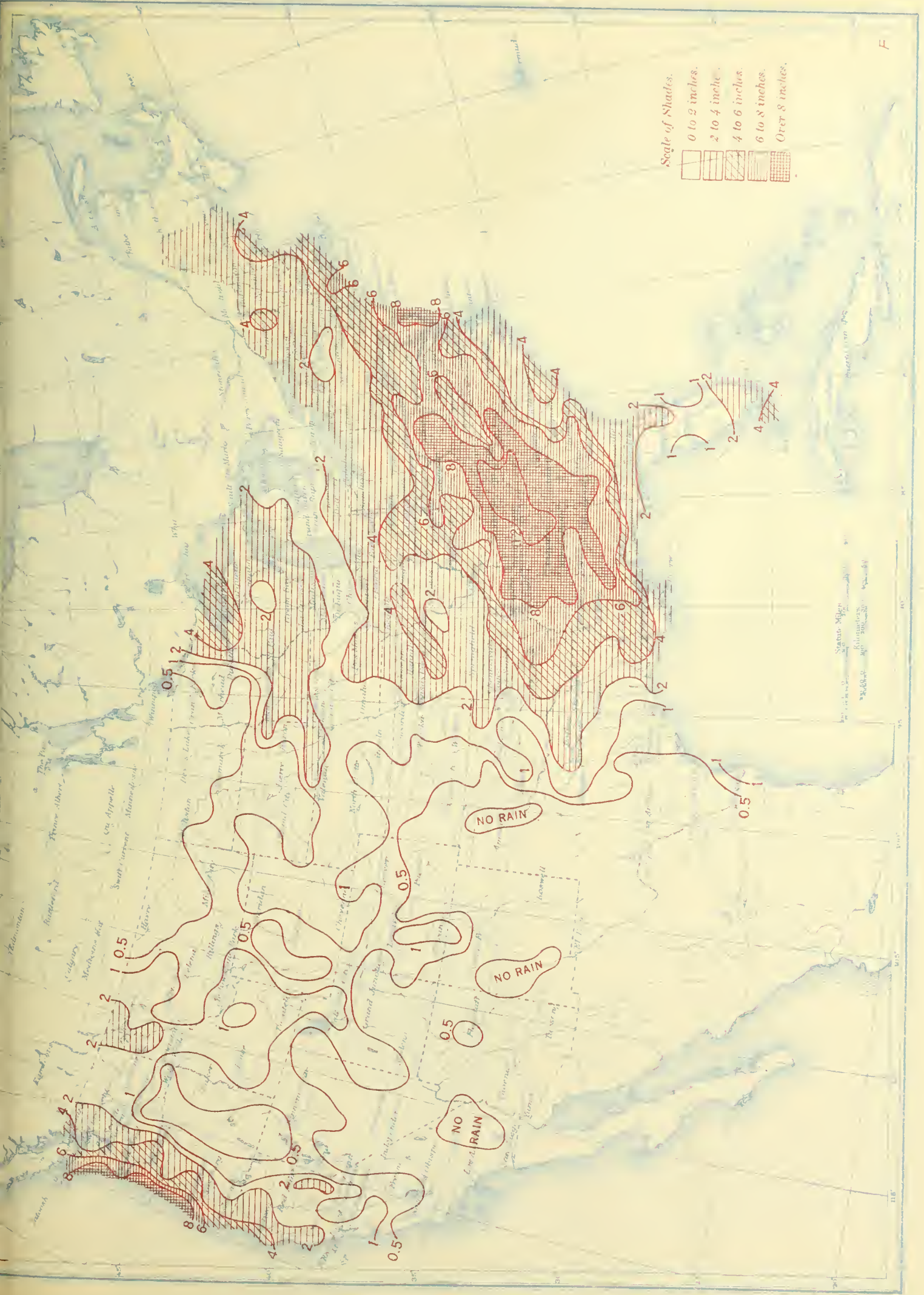
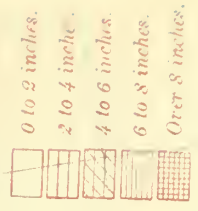
MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.			Moisture.		Sun-shine	
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	Percentage of possible sunshine.
							Miles per hour.	Direction.	Date.			
Atlantic City.....	30.12	30.58	7	29.58	5	9	32	sw.	17	78	74	55
Cape May City.....	30.12	30.58	7	29.60	5	11	42	s.	27	78	74	55
Long Branch.....	30.09	30.59	7	29.50	27	21	72	nw.	19	68	56	56
Newark.....	30.07	30.57	7	29.53	27	21	72	nw.	19	66	59	54
New York, N. Y.....	30.07	30.57	7	29.55	27	21	72	nw.	19	66	59	54
Palisades Park.....	30.07	30.57	7	29.53	27	21	72	nw.	19	66	59	54
Philadelphia, Pa.....	30.12	30.59	7	29.60	27	11	38	nw.	27	81	80	56
Sandy Hook.....	30.07	30.57	7	29.52	5	18	56	s.	27	80	79	56
Trenton.....	30.08	30.56	7	29.55	5	14	49	nw.	27	75	70	58

a, b, c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record. §§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

§§ Instruments are read in the morning; the maximum temperature then read is charged

Scale of Shades.



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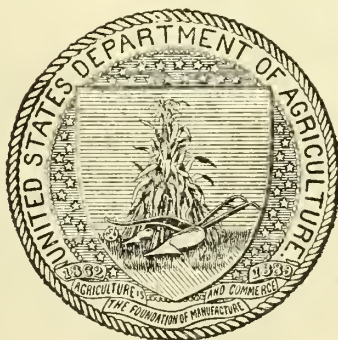
U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU
CHARLES F. MARVIN, CHIEF

LIB. T. G. A. H.
MAY 19 1917
U. S. DEPT. OF AGRICULTURE
CLIMATOLOGICAL DATA

NEW JERSEY SECTION

APRIL, 1917.

BY
G. HAROLD NOYES
METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
MAY 19, 1917.

Departure of the Mean Temperature from the Normal, April, 1917.



Shaded portions show excess (+).
Unshaded portions show deficiency (-).
Lines show amount of excess or deficiency.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

VOL. XXX. TRENTON, N. J., APRIL, 1917. No. 4.

GENERAL SUMMARY.

The first day of April developed into one of the hottest early Spring days in recent years; from mid-forenoon until about sunset, temperatures of 80° to 88° occurred in practically all portions of the State, and the average was approximately 20° warmer than normal. The monthly temperature averaged slightly below normal, the only periods of warm weather being the first four days, the 11th, 12th, and from the 17th to the 23d. No particularly cold weather occurred, but on the night of the 8th-9th there was a snow storm of unusual depth for April, but which, singularly enough, was less severe in the extreme northernmost counties than in other portions of the State. The general average of all weather factors during the month was so near normal as to leave few striking features of note. The usual significant feature of "April Showers" was entirely lacking, as more than half the month was clear, and the number of days with rain, deficient, and the accumulation of precipitation was the smallest April total since 1900. April has rarely been such a pleasant month in New Jersey.

The stock of ground water is considerably less than usual, and there has had to be some transporting of water for use of domestic animals owing to failure of wells. Streams and lakes reveal lower water levels than usual at this season of the year. Since the disappearance of the snow about the 10th, farm lands have been generally fit for plowing, and this work was carried forward to a stage somewhat in advance of the season; but unbroken cool weather the last of the month effectually checked germination and development of such crops as it had been possible to sow.

The mean daily stage of the Delaware River at Phillipsburg was 4.9 feet, the highest being 10.1 feet on the 3d. At Trenton the mean daily river stage was 3.3 feet, which was 0.7 foot below normal. The highest stage was 6.0 feet on the 3d.

Storm warnings were displayed along the coast on the 2d, from the 5th to the 8th, 10th, and 30th.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from the observations of 36 stations, was 48.8°, which was 0.2° below normal. The highest temperature was 88° at Highwood on the 1st, and the lowest, 15°, at Culvers Lake on the 10th. The warmest station was Bridgeton, with a mean temperature of 53.0°, and the coolest, Charlotteburg, 44.4°. The greatest daily range of temperature was 49° at Layton on the 18th. Temperatures in southern counties and the extreme western sections were slightly above normal, but elsewhere below.

PRECIPITATION.

The average total precipitation of the State, as deduced from the observations of 41 stations, was 2.39 inches, which was 1.12 inches below normal. The average total depth of snow (unmelted) was 4.7 inches, which was 3.9 inches greater than nor-

mal. The greatest monthly amount of precipitation was 3.54 inches at Tuckerton, and the least, 1.19 inches at Phillipsburg. The greatest monthly snowfall was 10.5 inches at Indian Mills, and the least, trace, at Charlotteburg and Newton. The greatest amount of precipitation in any 24 consecutive hours was 1.96 inches at Charlotteburg on the 5th-6th. There was a lack of precipitation throughout all regions, but the most marked deficiency was in the northwestern counties. The number of days on which 0.01 inch or more precipitation occurred was 9, which was 1 less than normal.

WIND.

The prevailing wind direction was from the northwest, with an approximate velocity of 13 miles per hour, which was a little greater than last year. The highest velocity, sustained for 5 consecutive minutes, was 88 miles per hour from the east, at Long Branch on the 6th. High winds were also reported on the 5th, 7th, 9th, 10th, and 21st.

SUNSHINE AND CLOUDINESS.

The average number of clear days throughout the State was 15, which was 4 more than normal; partly cloudy, 8; cloudy, 7; which was 2 each less than normal. The approximate percentage of possible sunshine was 58, which was somewhat above normal, and greater than last year.

MISCELLANEOUS.

Atmospheric pressure, reduced to sea level, averaged 29.97 inches, which was 0.03 inch below normal; highest readings occurred on the 4th, and lowest on the 5th and 6th. Thunderstorms occurred on the 12th, 21st, 22d, 23d, and 26th. Dense fog occurred in scattered localities on the 20th, 21st and 26th. Sleet occurred on the 5th and 9th. Hail was reported in one instance accompanying the storm of the 21st, which was severe throughout a considerable extent of central counties from the Delaware eastward. Killing frosts were reported on the 10th, 14th, 15th, 17th, 29th and 30th.

COMPARATIVE DATA FOR APRIL.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more prec.
1885.....	48.4	88	26	2.79	2.86	0.89	.....	.....	.....	.....
1886.....	50.6	86	27	3.40	5.48	1.86	.....	.....	.....	.....
1887.....	47.3	87	16	2.70	3.77	0.91	.....	.....	12	7
1888.....	47.9	92	22	3.28	4.68	1.89	.....	.....	6	9
1889.....	51.2	85	25	5.32	7.25	2.92	.....	.....	14	12
1890.....	50.4	86	21	5.32	4.58	1.89	.....	.....	7	8
1891.....	52.0	88	20	2.65	3.80	1.39	13	11	6	8
1892.....	49.3	87	19	2.49	4.41	1.05	9	13	8	8
1893.....	49.2	82	19	5.21	7.12	2.97	9	10	12	11
1894.....	50.3	88	10	3.09	4.86	1.71	12	9	7	9
1895.....	49.1	89	19	4.88	7.75	3.47	11	7	12	10
1896.....	52.4	98	12	1.35	2.39	0.64	13	10	7	7
1897.....	50.4	89	19	3.79	6.98	2.17	14	11	5	9
1898.....	47.8	87	13	3.74	4.94	2.17	8	11	11	11
1899.....	49.9	88	18	1.73	3.25	0.48	16	10	4	4
1900.....	50.8	82	18	2.29	8.03	1.59	14	9	7	6
1901.....	48.3	89	23	6.31	10.22	3.46	8	7	15	12
1902.....	50.2	93	20	3.62	5.99	2.45	10	11	9	9
1903.....	50.9	92	18	3.97	7.03	2.40	13	7	10	9
1904.....	46.7	85	16	3.42	4.03	1.53	12	11	7	10
1905.....	49.9	84	18	2.88	6.42	1.17	15	10	5	8
1906.....	51.2	87	17	3.64	8.67	2.06	11	9	10	11
1907.....	45.2	83	19	3.78	8.67	1.42	14	9	7	11
1908.....	51.2	93	13	2.72	8.86	3.44	10	11	9	13
1909.....	50.2	88	17	5.97	8.90	3.44	9	11	10	12
1910.....	53.5	88	20	5.34	7.56	2.87	10	10	10	11
1911.....	47.4	88	14	4.11	5.38	1.81	9	10	11	14
1912.....	50.4	82	18	3.56	6.02	1.44	14	7	9	11
1913.....	52.1	89	19	5.78	8.53	2.35	13	10	7	11
1914.....	48.4	89	15	3.68	4.78	1.28	14	10	6	9
1915.....	54.4	96	20	2.71	4.13	0.90	9	11	13	9
1916.....	48.2	85	20	3.32	6.14	1.19	15	8	7	9
1917.....	48.8	88	15	2.39	3.54	1.19	15	8	7	9

Climatological data for April, 1917.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation .01 in. or more.	Clear.	Pt. cloudy.			Cloudy.
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	26	49.8	+0.2	82	1†	26	10	43	1.33	-1.94	0.85	.....	5	24	0	6	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	25	44.4	-2.3	78	1†	24	10	41	2.95	-0.98	1.96	T.	8	21	5	4	w.	George S. Briggs.
Culvers Lake††.....	Sussex.....	848	16	.....	.....	.....	.....	15	10	.....	1.46	-2.41	0.74	0.7	9	17	10	3	nw.	Brice E. Riker.
Dover.....	Morris.....	600	33	46.6	-0.7	81	1†	23	10	39	2.21	-1.30	1.27	2.0	8	8	13	9	.....	William C. Harris.
Layton.....	Sussex.....	480	17	47.0	+0.5	85	1	24	4	49	1.92	-1.39	1.16	1.0	11	16	5	9	nw.	A. M. Depue.
Newton.....	Sussex.....	769	36	46.8	-0.8	80	1	21	10	38	1.31	-1.90	0.81	T	11	8	13	9	nw.	Irving G. Kern.
Phillipsburg.....	Warren.....	363	35	50.3	+0.7	82	1	26	10	39	1.19	-1.83	0.68	0.1	9	14	10	6	nw.	D. Wilson Smith.
Sussex.....	Sussex.....	442	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Means and extremes...				47.5	-0.4	85	1	15	10	49	1.77	-1.68	1.96	0.6	9	15	8	7	nw.	
<i>The Red Sandstone Plain.</i>																				
Bergen Point††*.....	Hudson.....	37	20	47.6 ^a	-0.9	83	1	25	9	36	3.22	-0.67	1.62	7.0	5	8	16	6	nw.	William H. Mitchell.
Boonton.....	Morris.....	400	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. W. Demmers.
Chatham.....	Morris.....	330	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Miss M. A. Butler.
Elizabeth.....	Union.....	45	38	49.4	-1.4	85	1	26	9	40	3.19	-0.38	1.08	6.0	14	9	13	8	nw.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	29	50.1	+1.0	83	1	26	9	39	2.17	-1.27	0.75	4.0	11	20	4	6	nw.	Hiram E. Deats.
Highwood.....	Bergen.....	90	28	46.6	-1.9	88	1	26	9†	44	2.44	-0.95	1.40	5.0	11	10	12	8	nw.	Charles J. Bates.
Jersey City.....	Hudson.....	10	18	49.7	+0.3	84	1	27	9	32	2.97	-0.73	1.22	7.3	11	8	12	10	nw.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	30	50.8	+0.4	81	1	28	9†	34	2.90	-0.50	0.91	4.0	9	11	12	7	nw.	Samuel W. Cochran.
Little Falls.....	Passaic.....	180	14	48.3 ^a	.....	82	1	.....	37	2.32	.....	-1.22	0.78	4.0	11	12	3	15	w.	Montclair Water Co.
Newark.....	Essex.....	159	75	49.1	0.0	85	1	27	9	38	2.17	-1.56	1.10	3.5	12	13	2	15	nw.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	110	64	48.4	-1.3	83	1	24	9†	36	2.49	-1.30	0.98	7.2	10	13	10	7	w.	N. J. Experiment Station.
Palisades Park.....	Bergen.....	80	2	46.8	.....	83	1	26	9	37	2.23	-0.73	1.22	5.5	12	11	14	5	nw.	George P. Kirsten.
Paterson.....	Passaic.....	80	46	50.2	-0.1	85	1†	27	9	44	2.02	-1.47	1.12	2.0	8	.....	.....	.....	nw.	Marion T. Probert.
Plainfield.....	Union.....	100	31	49.1	+0.9	83	1	26	9	39	2.55	-1.35	0.81	5.0	11	12	7	11	nw.	John Neagle.
Pompton Plains.....	Morris.....	195	15	.....	.....	.....	.....	.....	.....	.....	2.19	-1.37	1.28	2.0	12	.....	.....	.....	.....	M. S. Taylor
Somerville.....	Somerset.....	60	35	48.1	-0.6	83	1	24	9†	43	2.17	-1.38	0.84	3.0	8	13	9	8	nw.	A. A. Macdonald.
South Orange.....	Essex.....	200	47	47.8	-0.5	81	1	26	9†	35	2.29	-1.20	1.33	4.0	9	9	13	8	nw.	Dr. W. J. Chandler.
New York, N. Y.....	.....	365	47	47.2	-0.9	79	1	25	9	31	2.35	-0.95	0.72	6.5	12	6	10	14	uw.	U. S. Weather Bureau.
Means and extremes...				48.8	-0.3	88	1	24	9†	44	2.44	-1.13	1.40	4.5	11	12	9	9	nw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	36	53.0	+1.2	85	21	26	9	35	2.97	-0.46	1.08	7.0	7	18	5	7	w.	Henry A. Jorden.
Burlington.....	Burlington.....	12	31	51.4	+0.3	83	1	26	9†	37	2.47	-0.90	0.76	7.0	7	21	3	6	nw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	25	51.0 ^a	+0.7	85 ^a	21	24	10	35	3.00	-0.14	1.28	6.5	7	20	5	5	nw	George L. Wilson.
Hammonton.....	Atlantic.....	103	15	.....	.....	.....	.....	.....	.....	.....	2.27	-1.57	0.92	3.7	7	24	2	4	w.	G. H. Parkhurst.
Hightstown.....	Mercer.....	120	25	49.0 ^b	-0.8	81 ^b	1	25	9	37	2.08	-1.83	0.68	.....	9	.....	.....	.....	.....	G. Franklin Eldridge.
Imlaystown.....	Monmouth.....	185	29	47.4 ^b	-3.2	80	1†	22	9	40	2.05	-1.45	0.80	4.0	7	.....	.....	.....	w.	H. E. Bullock.
Indian Mills.....	Burlington.....	76	28	50.2	-0.1	84	1†	24	9†	41	3.17	+0.04	1.10	10.5	9	12	13	5	nw.	James M. Armstrong.
Lakewood.....	Ocean.....	54	14	47.6	-2.1	81	1	26	10	41	2.86	-0.87	0.84	8.0	9	11	8	11	ne.	R. W. Holman.
Moorestown.....	Burlington.....	75	55	52.0	+2.0	83	1†	26	9	36	2.32	-0.87	1.13	8.0	7	17	9	4	nw.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	10	.....	.....	.....	.....	.....	.....	.....	2.37	.....	0.54	6.0	7	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	19	.....	.....	.....	.....	.....	.....	.....	2.88	-0.64	0.68	.....	6	20	5	5	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	46	49.1	-0.7	80	1	25	9	31	2.29	-1.00	0.83	6.2	11	11	10	9	nw.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	24	49.0	+1.1	85	1	25	10†	38	3.54	-0.25	1.03	6.0	7	16	8	6	nw.	Frank R. Austin.
Vineland.....	Cumberland.....	109	49	52.7 ^a	+2.0	85	21	27	9	34	3.30	-0.04	0.92	8.0	8	19	4	7	w	H. C. Himes.
Woodbine.....	Cape May.....	43	26	50.8	+1.3	84	21	26	10	35	2.36	-1.22	0.60	3.0	6	19	7	4	w.	Baron de Hirsch Agr. Sch.
Philadelphia, Pa.....	.....	117	47	52.3	+1.5	81	1	28	9	27	2.47	-0.44	1.19	7.0	9	10	10	10	nw.	U. S. Weather Bureau.
Means and extremes...				50.3	+0.1	85	1†	22	9	41	2.66	-0.80	1.28	6.5	8	17	7	6	nw.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	28	45.7	-2.4	83	1	26	9†	36	2.49	-1.18	0.73	6.5	9	16	6	8	nw.	Wilbur H. Pancoast.
Atlantic City.....	Atlantic.....	16	44	48.2	+0.6	72	1	27	10	28	2.01	-0.98	0.62	5.0	6	10	15	5	nw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	33	48.9	+0.5	71	22	28	9	25	2.54	-0.45	1.08	4.3	8	12	13	5	e.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	10	46.0	.....	83	1	26	10	39	2.61	.....	0.75	6.6	10	14	10	6	nw.	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	19	46.2	-0.5	77	1	28	9	32	1.91	-2.38	0.72	5.5	8	10	9	11	nw.	U. S. Weather Bureau.
Means and extremes...				47.0	-0.4	83	1	26	9†	39	2.31	-1.25	1.08	5.6	8	12	11	7	nw.	
For the State.....				48.8	-0.2	88	1	15	10	49	2.39	-1.12	1.96	4.7	9	15	8	7	nw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

* Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne.

Daily precipitation for April, 1917.

Stations.	Watershead.	Day of month.																															Total.			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				
<i>The Highlands and Kittatinny Valley.</i>																																				
Belvidere.....	Delaware.....			.05		.85															.11	.17							.15				1.33			
Charlottesville.....	Passaic.....	.03				1.96				T			.18								.12	.02	.08	.28		.20			.20			.10		2.95		
Culvers Lake.....	Delaware.....		T.			.74	T.						.20								.12	.02	.08	T.	.05		.05		.10			.10		1.46		
Dover.....	Passaic.....					*	1.27			.20			.21								.02	.09		.09		.08		.04	.06		*		.10		2.21	
Layton.....	Delaware.....	.03				1.16	.09						.15								.02	.09		.09		.08		.04	.06		.11			1.92		
Newton.....	Delaware.....	.01		T.		T.	.81	.02					.13	T.							*	.06	.07	.06		.05		.04				.06		1.31		
Phillipsburg.....	do.....					.10	.68	.02		T.			T.							T.	.19	T.	.10	T.	.04		.03	.02				.01		1.19		
Sussex.....	Hudson.....																																			
<i>The Red Sandstone Plain.</i>																																				
Bergen Point.....	Coast.....	T.				T.	1.62			.67			T	T.							.08	.42			T.		.43	T.			T			3.22		
Boonton III.....	Passaic.....																																			
Chatham II.....	do.....					*	1.08	.02		.71			.03	.02							T.	.05	.42		.01	.42		.28	.07			.05				
Elizabeth.....	Coast.....	.03					.08	.75	.05	.40			T.	T.							T.	.10	*	.58	T.	.07		.09	.03			.02			3.19	
Flemington.....	Raritan.....																				T.	.10	*	.58	T.	.07		.09	.03			.02			2.17	
Highwood.....	Hackensack.....					T	1.40	.08		.36			.03								.09	.25		.01	.06		.10	.04								
Jersey City**.....	Coast.....					*	1.22		*	.64			.17	T.							T.	.07	.30		T.	.16		.06	.32			.02			2.44	
Lambertville.....	Delaware.....					.23	.91			.48			.08								T.	.16	.83		.01	.03		.17				.03			2.97	
Little Falls**.....	Passaic.....	T.				.78	.73	.02	T.	.21			.06								T.	.04	.26		T.	.02		.15	.02			.03			2.90	
Newark**.....	Coast.....	T.		T.		.40	.70		.01	.34			.11	T.							T.	.02	.28		.10	.03		.12	.05		T.	.01			2.32	
New Brunswick.....	Raritan.....	T.				.04	.98			.30			T.	.01							T.	.04	.08		.71	.08		.23	.02						2.17	
Palisades Park.....	Hackensack.....			T.		T.	*	1.20	T.	.35			.01	T.							T.	.07	.30		*	.08		.23	.02						2.49	
Paterson.....	Passaic.....	T.				.12				.26			.05	T.							T.	.06	.28		T.			.19				.02			2.23	
Plainfield**.....	Raritan.....					.81	.33		.01	.49			T.	T.		T.					T.	.03	.48		.04	.10		.20			.01	.05			2.02	
Pompton Plains I.....	Passaic.....	.03				.128	.11			.16			.04								T.	.03	.04	.24		.13		.02	.08			.03			2.55	
Somerville.....	Raritan.....					.13	.84			.45			T.								T.	.08		.24		.09		.16	.18						2.19	
South Orange.....	Rahway.....					.30	1.03			.34			.06	T.							T.	.04	.34		T.	.06		.10	.06		T.	T.			2.17	
New York, N. Y***.....	Coast.....	T.		T.		.47	.25	.01	.10	.60			.17	T.							T.	.04	.20		T.	.17		.30	.01		T.	.03			2.29	
<i>The Southern Interior.</i>																																				
Bridgeton.....	Coast.....					*	1.08			.90			.33								.03	.05			T.		.58								2.97	
Burlington.....	Delaware.....					.26	.76			.70											.10	.02	.30			T.		.33							2.47	
Clayton.....	Maurice.....					.42	.86		T.	1.03			.06								T.	.19		.04	.40		.40								3.00	
Hammonton.....	Mullica.....					.67	.25			.40			.13								T.	.17		.03	.62		.36	.03							2.27	
Hightstown.....	Raritan.....					.16	.63			.68			.14									.04			.03		.36	.03				.01			2.08	
Imlaystown.....	Delaware.....					.20	.60			.40			.10								.15		.10				.50								2.05	
Indian Mills.....	Mullica.....					.22	.61		T.	1.10			.08								T.	.02	.40		.07		.64					.03			3.17	
Lakewood.....	Metedeconk.....			T.		.15	.83	T.		.84			.03	.06							T.	.06	.30		T.	.04		.55				T.			2.86	
Moorestown.....	Delaware.....					.17	.96			.56			T.								T.	.05	T.	.14		.02		.42				T.			2.32	
Northfield.....	Coast.....					.31	.42			.51			.54									.06			.02		.51								2.37	
Pleasantville.....	Coast.....			T.		.50	.39			.60			.68								T.	T.	.04	T.		T.		.67							2.88	
Trenton***.....	Delaware.....					.64	.19		.10	.57			.13	.01							T.	.12	.14		T.	.02		.36	.01			T.			2.29	
Tuckerton.....	Coast.....					.35	.40			.83			T.	1.03							T.	.02			T.		.79								3.54	
Vineland.....	Maurice.....					.27	.85			.92			.30	T.							T.	.04	.45		.05	T.	.45	.01							3.30	
Woodbine.....	Coast.....					.40	.60			.50			.54								T.	.03	.22		T.	.07		.37							2.36	
Philadelphia, Pa.....	Coast.....					1.18	.01		.16	.70			T.	.01							T.	.02	.07		.01		.31				T.				2.47	
<i>The Sea Coast.</i>																																				
Asbury Park.....	Coast.....			T.		.54	.19		.10	.55			.02	.06							T.	T.	.65			.03		.35	T.			T	T		2.49	
Atlantic City***.....	do.....			T.		.62	T.		.03	.50			.54								T.	T.	.05			T.		.27							2.01	
Cape May City.....	do.....					.34	.15		T	1.08			.51								T.	.02	.05		T.		.24	.15							2.54	
Long Branch**.....	do.....					.39	.26		.01	.66			.06								T.	.04	.75		T.	.06		.37					.01			2.61
Sandy Hook***.....	do.....					.42	.08		.13	.59			T.	T.							T.	.03	.22		T.	.07		.37				T.	T.			1.91

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded.

†† Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.

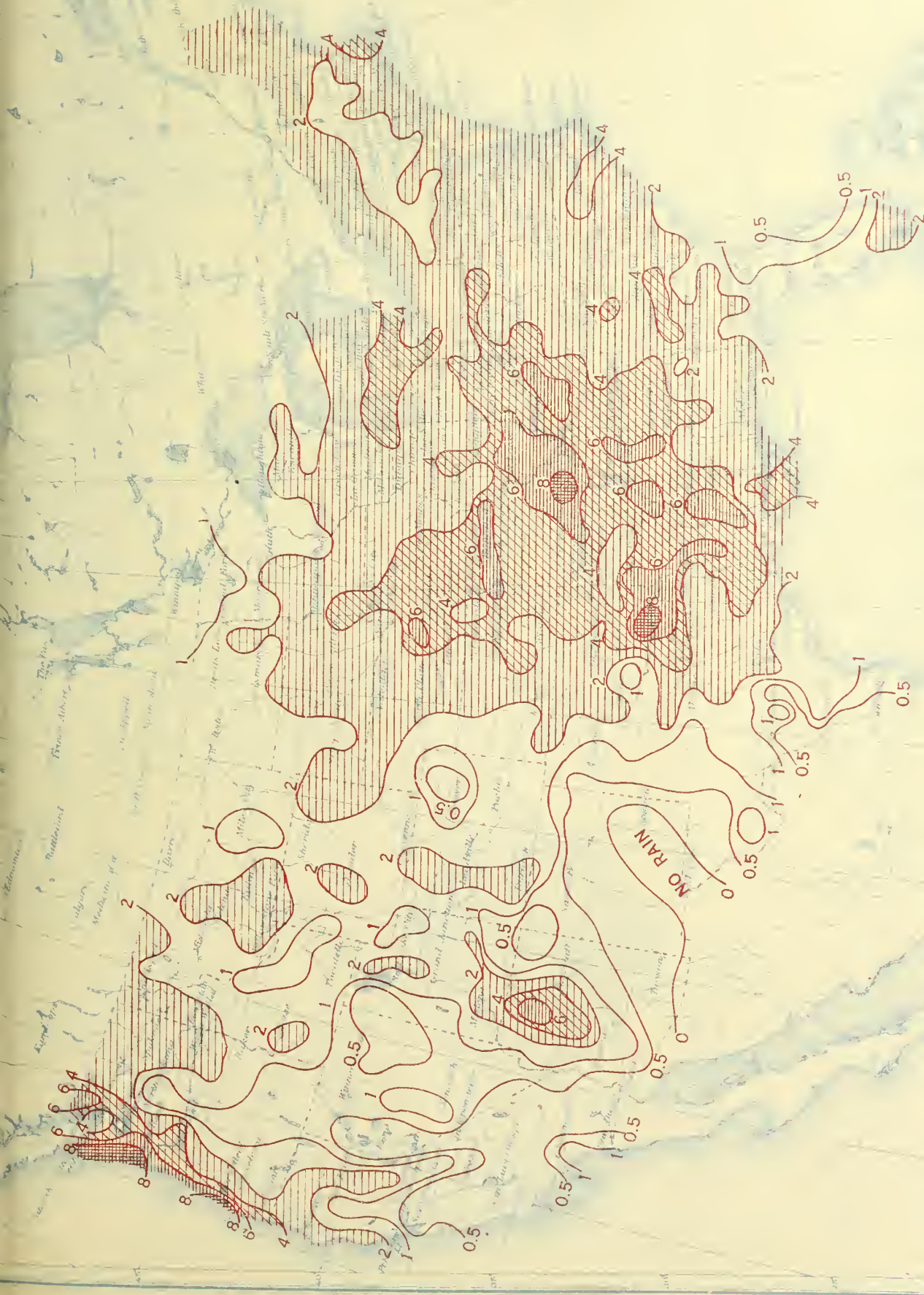
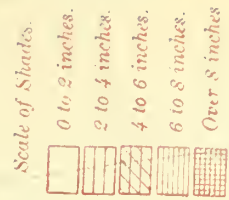
* Precipitation included in the next following measurement. ** Precipitation for 24-hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.			Moisture.		Sun- shine
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.		Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	
							Miles per hour.	Direction.				Date.
Atlantic City.....	20.99	30.46	4	29.29	6	9	34	se.	5	73	66
Cape May City.....	30.00	30.49	4	29.48	5	9	50	e.	5	70	54
Long Branch.....	29.97	30.42	4	29.24	6	16	88	e.	6	70	63
Newark.....							40	nw.	9	70*	64†
New York, N. Y.....							68	nw.	7	67	59
Palisades Park.....	29.95	30.41	4	29.26	6	18	68	nw.	7	67	52
Philadelphia, Pa.....	29.95	30.40	4	29.25	6						
Sandy Hook.....	30.00	30.48	4	29.24	5	11	34	e.	5	78	76
Trenton.....	29.95	30.43	4	29.24	6	16	55	e.	5	84	80
	29.96	30.45	4	29.24	6	13	55	w.	21	71	63

Daily temperatures for April, 1917.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean		
<i>The Highlands and Kittatinny Valley</i>																																		
Belvidere.....	Maximum...	82	72	58	65	56	45	52	44	42	50	63	66	...	55	51	56	68	78	75	68	82	71	78	60	63	53	56	60	69	59	...	62.0 ^a	
	Minimum...	45	47	41	32	35	33	38	28	29	26	33	40	34	31	27	27	29	35	45	47	50	47	50	45	33	41	40	40	34	46	...	37.6	
Charlotteburg.....	Maximum...	78	54	49	58	40	44	44	40	40	41	58	49	46	50	45	48	64	70	68	54	78	75	64	60	53	50	52	52	59	43	...	54.2	
	Minimum...	44	39	36	32	26	31	33	28	26	24	30	36	29	28	32	31	29	47	44	44	48	37	42	30	37	37	33	34	40	...	34.5		
Dover.....	Maximum...	81	68	54	60	46	44	42	42	40	44	58	56	50	50	48	51	67	80	70	67	84	75	76	65	62	52	54	38	35	41	...	56.9	
	Minimum...	46	40	41	30	32	32	34	29	25	23	31	38	31	29	28	33	31	34	48	45	46	48	43	44	32	39	39	38	35	41	...	36.2	
Layton.....	Maximum...	85	72	54	60	52	42	45	43	40	44	58	56	50	50	48	51	67	80	70	67	84	75	76	65	62	52	54	38	35	41	...	59.4	
	Minimum...	39	44	40	24	31	31	36	28	28	25	30	38	31	31	26	29	26	31	49	46	48	43	38	36	25	40	39	32	28	42	...	34.5	
Newton.....	Maximum...	80	72	53	58	52	44	41	41	38	43	61	58	51	49	45	49	65	74	70	67	79	70	65	59	51	54	55	65	66	53	...	57.6	
	Minimum...	49	42	38	32	34	31	33	28	26	21	29	38	35	29	31	31	39	50	44	41	47	41	43	30	38	36	36	34	41	...	35.9		
Phillipshurg.....	Maximum...	82	75	55	62	58	46	50	44	41	49	64	67	52	53	51	55	67	77	75	69	81	73	79	67	62	59	56	61	69	60	...	62.0	
	Minimum...	46	46	41	36	36	33	38	30	28	26	34	42	37	31	29	32	31	38	53	46	49	48	45	45	33	41	41	42	38	44	...	38.6	
Sussex.....	Maximum...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Minimum...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
<i>The Red Sandstone Plain.</i>																																		
Bergen Point.....	Maximum...	83	68	...	62	48	50	53	44	41	46	63	51	50	49	48	54	61	73	71	63	73	72	80	57	55	47	57	59	60	48	...	58.1 ^a	
	Minimum...	48	40	...	36	38	34	31	28	25	28	29	...	30	32	29	34	32	37	47	44	46	47	47	44	36	41	40	40	39	41	...	37.2 ^b	
Boonton§§.....	Maximum...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Minimum...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Elizabeth.....	Maximum...	85	78	58	63	52	49	50	47	44	49	65	56	51	56	54	55	67	75	72	58	77	74	81	65	58	50	57	63	63	48	...	60.7	
	Minimum...	45	42	44	34	34	35	39	30	26	27	31	40	39	29	27	32	29	35	58	47	46	47	44	46	36	39	40	40	35	44	...	38.0	
Flemington.....	Maximum...	83	73	58	64	60	49	54	45	41	50	66	56	51	55	52	56	68	74	73	70	80	74	80	65	62	58	58	62	69	60	...	62.2	
	Minimum...	44	43	43	33	36	34	36	31	26	27	33	40	34	28	29	32	31	35	50	47	47	50	44	45	35	42	40	42	38	44	...	38.0	
Hightwood.....	Maximum...	88	57	57	59	49	46	46	47	41	46	61	52	48	54	50	52	64	71	69	56	70	73	75	59	58	45	55	58	63	47	...	57.2	
	Minimum...	44	40	41	31	32	35	37	31	26	27	31	38	34	26	26	33	28	33	45	46	45	45	42	45	35	38	40	33	32	43	...	36.1	
Jersey City.....	Maximum...	84	68	58	62	48	49	48	46	45	48	64	56	50	56	51	55	60	73	69	57	70	73	79	63	57	48	57	58	63	48	...	58.8	
	Minimum...	54	42	45	38	38	36	39	33	27	28	32	42	38	33	34	36	36	41	48	48	48	50	51	47	39	42	41	42	45	44	...	40.6	
Lambertville.....	Maximum...	81	76	57	59	57	47	52	46	43	49	62	60	53	51	50	54	63	73	72	69	78	73	76	72	60	57	55	62	66	64	...	61.2	
	Minimum...	47	45	44	36	39	36	38	34	28	28	35	43	38	33	32	36	33	40	50	48	49	51	49	46	36	44	42	45	39	46	...	40.3	
Little Falls.....	Maximum...	82	60	57	59	51	50	47	47	41	46	61	57	49	53	50	52	62	73	73	58	76	73	78	62	59	49	57	60	64	48	...	58.5	
	Minimum...	45	43	33	33	34	35	30	31	...	...	30	41	34	30	28	33	32	36	49	47	50	45	44	36	41	40	37	37	44	48	...	38.1 ^b	
Newark.....	Maximum...	85	55	56	62	47	47	45	45	40	44	65	55	49	55	48	53	65	74	72	53	73	74	79	58	58	47	55	59	64	48	...	57.7	
	Minimum...	47	42	44	40	35	36	39	33	27	29	36	41	36	34	35	40	37	41	47	47	48	54	50	45	37	41	41	43	44	45	...	40.5	
New Brunswick.....	Maximum...	83	76	55	60	57	48	48	45	42	46	62	60	49	52	49	53	63	73	69	63	76	71	79	64	54	46	55	50	62	49	...	58.8	
	Minimum...	50	41	43	35	35	33	38	30	24	24	34	40	36	30	29	33	31	36	47	45	46	50	43	45	35	39	41	41	40	44	...	37.9	
Palisades Park.....	Maximum...	83	53	55	60	46	47	44	45	40	45	62	50	50	54	50	54	63	73	69	56	70	73	77	58	56	46	55	59	61	47	...	56.7	
	Minimum...	47	40	38	33	34	34	36	31	26	28	32	39	36	29	27	35	30	36	45	46	45	47	45	42	35	38	40	37	36	43	...	37.0	
Paterson.....	Maximum...	85	85	60	63	57	47	47	46	48	64	59	51	56	51	55	67	78	74	62	74	75	80	64	60	48	57	60	66	55	...	61.4		
	Minimum...	44	41	44	36	37	35	39	31	27	28	33	40	38	32	31	38	35	36	48	47	47	51	49	47	35	40	41	40	40	43	...	59.1	
Plainfield.....	Maximum...	83	68	58	68	49	48	49	46	42	49	65	53	50	53	55	66	74	71	58	78	73	80	62	57	48	58	60	64	49	...	59.7		
	Minimum...	44	42	45	36	35	34	38	31	26	28	34	40	38	29	28	35	31	35	48	47	46	51	45	46	36	40	41	42	41	...	38.5		
Somerville.....	Maximum...	83	78	56	61	60	48	49	47	39	48	66	59	51	50	54	65	74	71	68	78	74	79	66	58	52	57	59	66	58	...	60.8		
	Minimum...	40	41	42	26	33	32	37	29	24	26	32	39	38	32	25	24	32	29	31	46	44	45	49	40	42	34	39	38	36	34	41	...	35.4
South Orange.....	Maximum...	81	60	53	59	47	48	46	45	39	45	61	54	48	52	47	52	63	72	69	55	76	71	77	57	55	46	55	57	60	46	...	56.5	
	Minimum...	48	41	41	37	35	34	38	32	26	26	33	40	36	32	31	36	35	37	46	48	47	53	56	47	35	40	41	41	45	38	...	39.2	
New York, N. Y.....	Maximum...	79	56	54	58	46	47	44	44	39	44	61	55	48																				



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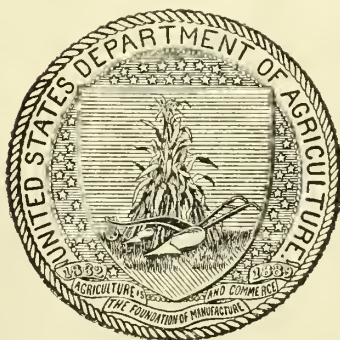
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CLIMATOLOGICAL DATA

NEW JERSEY SECTION

MAY, 1917.

BY
G. HAROLD NOYES
METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
JUNE 19, 1917.

Departure of the Mean Temperature from the Normal, May, 1917.



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

Vol. XXX. TRENTON, N. J., MAY, 1917. No. 5.

GENERAL SUMMARY.

The one significant and prominently outstanding feature of May weather in New Jersey in 1917, was the moderate but persistently low temperature. The warmth was above normal practically only on the 19th and 20th, and ranged from 10° to 15° below normal during the first and last weeks of the month. So far as is known there are no authentic records that reveal so cold a May in this region, and the negative departures of the various stations varied from 4° to 8°. The nearest approach to this cold weather was ten years ago, when temperatures averaged about a degree and a half higher than the present month, but was attended by a considerable excess of rain, whereas this month was deficient both in rainfall and atmospheric moisture. April, 1915, averaged warmer than this May. Temperatures of below freezing occurred in nearly all sections of the northern half of the State on the 4th, and the conspicuously warm day was Sunday, the 20th, with the readings from 80° to 90°.

Crop growth made little headway owing to the cold weather, but was not injured to any great extent, although some replanting of corn, potatoes and beans was necessary. The lack of abundant rain saved what otherwise might have been a seriously disastrous crop situation, and the accumulated rainfall since the first of the year was still subnormal at the close of the month.

The mean daily stage of the Delaware River at Phillipsburg was 2.9 feet, the highest readings being on the 7th and 10th. At Trenton the mean daily stage was 2.0 feet, which was 0.7 foot below normal, the highest stages were 2.8 feet on the 8th and 9th.

The temperature departure from normal for the year 1917, to date, by sections is: The Highlands, -1.6°; Red Sandstone Plain, -1.3°; The Southern Interior, -1.2°; The Seacoast, 1.1°. The precipitation accumulated departure from normal for the year 1917 to date is, The Highlands, -4.21; The Red Sandstone Plain, -3.75; The Southern Interior, -1.93; The Seacoast, -2.26.

Storm warnings were displayed along the coast on the 4th, 5th, 7th, 22d, 24th and 28th.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from the observations of 37 stations was 54.0°, which was 6.3° below normal. The highest temperature was 90° at Tuckerton and Long Branch on the 20th, and the lowest, 22° at Culvers Lake on the 4th. The highest monthly mean temperature was 57.1° at Bridgeton, and the lowest, 49.1° at Charlotteburg. The greatest daily range of temperature was 42° at Clayton and Woodbine on the 18th and 16th respectively.

PRECIPITATION.

The average total rainfall of the State, as deduced from the observations of 41 stations was 3.83 inches, which was 0.15 inch below normal. Snow, measuring an inch, was reported at Cul-

vers Lake on the 6th and 12th. The greatest monthly amount of rainfall was 6.83 inches at Long Branch, and the least, 2.08 at Vineland. The greatest amount of rainfall in any 24 consecutive hours was 2.77 inches at Long Branch on the 4th-5th. There was a fairly uniform deficiency of rainfall, except for slight excesses in restricted areas in northeastern and southwestern counties. The average number of days on which 0.01 inch or more rainfall occurred was 11, which was normal.

WIND.

The prevailing wind direction was from the northwest, with an approximate velocity of 13 miles per hour, which was somewhat above normal, and greater than last May. The highest velocity, sustained for 5 consecutive minutes, was 64 miles per hour from the northeast, at Long Branch, on the 5th. High winds also occurred on the 2d, 4th, 10th, 11th, 14th, 15th, and 20th.

SUNSHINE AND CLOUDINESS.

The average number of clear days, throughout the State, was 10, which was 2 below normal; partly cloudy, 10, which was normal; cloudy, 11, which was 2 above normal. The approximate percentage of possible sunshine was 53, and was considerably less than normal.

MISCELLANEOUS.

Considerable frost occurred very generally on the 4th, and in somewhat more susceptible places on the 16th, 18th, 24th, and 26th. Dense fog occurred along portions of the coast on the 2d, 22d, and 28th. Solar halos were observed on the 4th, 8th, 11th, 14th and 26th. Hail occurred in various sections on the 1st, 9th, 10th, 12th, and generally on the 28th. Thunderstorms were variously reported on the 1st, 8th, 9th, 12th, 18th, 19th, 20th, 22d, 23d, 27th, 28th and 31st. Relative humidity averaged 8% drier than normal.

COMPARATIVE DATA FOR MAY.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more prec.
1885.....	57.3	90	29	2.74	5.20	1.18	.....	.....	.....	.....
1886.....	58.8	87	36	6.07	8.46	4.15	.....	.....	.....	.....
1887.....	63.3	94	35	1.37	3.82	0.08	.....	.....	.....	.....
1888.....	58.6	90	26	4.92	6.48	3.00	.....	.....	.....	.....
1889.....	62.3	94	32	4.09	6.60	2.43	.....	.....	.....	.....
1890.....	60.7	87	33	4.24	7.17	2.60	.....	.....	.....	.....
1891.....	59.5	92	28	2.97	5.39	1.78	9	11	11	9
1892.....	60.1	90	30	5.04	6.52	3.26	8	13	10	13
1893.....	59.4	95	29	4.07	6.38	2.55	13	8	10	10
1894.....	61.4	93	30	7.72	15.61	3.57	11	9	11	13
1895.....	60.9	102	28	2.85	3.95	1.66	12	12	7	8
1896.....	65.3	98	29	3.21	4.54	1.62	10	12	9	10
1897.....	60.6	87	29	5.68	9.11	1.71	11	12	8	12
1898.....	58.5	93	29	7.00	9.26	3.92	8	8	15	18
1899.....	61.1	94	29	1.92	3.15	1.15	12	12	7	9
1900.....	60.9	98	26	4.71	7.33	2.53	13	7	11	10
1901.....	58.6	90	29	5.60	8.13	3.10	9	9	13	16
1902.....	60.3	95	29	2.04	4.63	1.11	15	11	5	7
1903.....	62.7	98	21	0.59	1.32	0.08	16	10	5	4
1904.....	62.8	97	31	2.60	6.69	1.01	17	9	5	8
1905.....	61.4	89	22	1.71	3.94	0.42	12	11	8	8
1906.....	61.0	94	24	4.21	6.28	2.37	16	8	7	10
1907.....	55.4	91	22	5.05	8.09	2.51	12	9	10	12
1908.....	61.6	95	29	7.10	9.99	4.39	9	10	12	13
1909.....	60.0	91	27	2.30	4.84	0.79	10	11	10	9
1910.....	60.0	94	27	2.54	4.25	1.48	10	10	11	12
1911.....	64.5	99	22	1.37	3.84	0.31	14	11	6	7
1912.....	62.0	92	31	4.09	6.47	2.79	11	11	9	11
1913.....	60.3	94	25	3.45	4.86	2.53	15	7	9	9
1914.....	63.1	98	30	2.93	5.09	0.95	14	9	7	10
1915.....	58.1	88	30	3.82	6.15	2.00	13	7	11	13
1916.....	61.1	90	32	3.48	5.27	2.14	12	12	11	8
1917.....	54.0	90	22	3.83	6.83	2.08	10	10	11	11

Climatological data for May, 1917.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.							Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation 40 in. or more.	Clear.	Pt. cloudy.	Cloudy.		
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	26	52.8	-7.9	84	20	28	4	40	3.85	-0.04	1.05	0	11	14	8	9	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	25	49.1	-8.2	78	20	26	4	39	4.88	+0.08	.....	0	11	14	11	6	nw.	George S. Briggs.
Culvers Lake†.....	Sussex.....	848	16	.....	.....	.....	.....	22	4	.....	3.99	+0.49	1.33	1.0	15	12	11	8	e.	Brice E. Riker.
Dover.....	Morris.....	600	33	51.6	-7.0	83	20	27	4	34	3.73	-0.41	.....	0	12	6	8	17	.....	William C. Harris.
Layton.....	Sussex.....	480	17	51.2	-6.7	82	20	25	4	41	3.34	+0.01	0.98	0	16	9	4	18	nw.	A. M. Depue.
Newton.....	Sussex.....	769	36	50.9	-8.4	80	20	31	4	29	3.94	-0.20	1.25	0	13	6	12	13	nw.	Irving G. Kern.
Phillipsburg.....	Warren.....	363	35	54.6	-6.7	86	20	31	4	40	3.15	-0.90	1.28	0	11	12	7	12	nw.	D. Wilson Smith.
Sussex.....	Sussex.....	442	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Means and extremes...				51.7	-7.5	86	20	22	4	41	3.84	-0.14	1.33	0.1	13	10	9	12	nw.	
<i>The Red Sandstone Plain.</i>																				
Bergen Point††*.....	Hudson.....	37	20	53.8 ¹	-5.9	87	20	37	6	32	5.74	+1.76	1.71	0	8	3	21	7	se.	William H. Mitchell.
Boonton.....	Morris.....	400	27	52.6	.....	84	20	27	4	39	4.50	+0.25	1.68	0	16	16	6	9	nw.	J. W. Demmers.
Chatham.....	Morris.....	330	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Miss M. A. Butler.
Elizabeth.....	Union.....	45	38	54.6	-7.6	87	20	31	4	39	3.92	0.00	1.33	0	11	7	14	10	nw.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	29	54.6	-5.3	87	20	30	4	39	3.88	-0.41	1.39	0	9	15	6	10	nw.	Hiram E. Deats.
Highwood.....	Bergen.....	90	28	52.3	-7.4	84	20	28	4	35	4.09	+0.25	1.50	0	14	5	12	14	nw.	Charles J. Bates.
Jersey City.....	Hudson.....	10	18	55.0	-6.1	87	20	38	4	34	3.75	+0.57	0.93	0	11	7	13	11	nw.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	30	55.3	-6.4	84	20	34	4	33	3.12	-0.95	1.09	0	10	8	14	9	nw.	Samuel W. Cochran.
Little Falls.....	Passaic.....	180	14	53.4 ¹	.....	83	20	30	3	35	4.00	-0.76	1.35	0	13	11	8	12	w.	Montclair Water Co.
Newark.....	Essex.....	159	75	54.7	-6.1	86	20	39	24	32	3.08	-0.96	1.32	0	13	8	11	12	nw.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	110	64	53.9	-6.7	86	20	32	4	36	3.87	-0.04	1.33	0	13	13	8	10	nw.	N. J. Experiment Station.
Palisades Park.....	Bergen.....	80	2	52.2	.....	84	20	30	4	35	3.84	.....	1.36	0	14	7	12	12	nw.	George P. Kirsten.
Paterson.....	Passaic.....	80	46	55.2	-6.1	87	20	34	4	37	4.28	-0.21	1.50	0	13	0	9	22	nw.	Marion T. Probert.
Plainfield.....	Union.....	100	31	54.0	-6.3	87	20	31	4	38	4.89	+1.06	1.71	0	13	8	9	14	nw.	John Neagle.
Pompton Plains.....	Morris.....	195	15	.....	.....	.....	.....	.....	.....	.....	4.02	-0.34	1.51	0	11	.....	.....	.....	.....	M. S. Taylor
Somerville.....	Somerset.....	60	35	53.0	-7.1	85	20	27	4	40	4.03	-0.09	1.05	0	10	9	9	13	nw.	A. A. Macdonald.
South Orange.....	Essex.....	200	47	53.2	-6.8	83	20	33	4	32	.....	.....	.....	0	.....	11	6	14	w.	Dr. W. J. Chandler.
New York, N. Y.....	.....	365	47	53.2	-6.1	82	20	38	6	29	3.29	+0.11	1.12	0	13	4	10	17	nw.	U. S. Weather Bureau.
Means and extremes...				53.9	-6.5	87	20	27	4	40	4.07	+0.01	1.71	0	12	9	10	12	nw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	36	57.1	-6.8	87	20	36	6	38	4.37	+0.44	0.98	0	10	20	5	6	sw.	Henry A. Jorden.
Burlington.....	Burlington.....	12	31	56.0	-6.1	87	20	35	4	37	3.83	-0.40	1.09	0	10	17	2	12	nw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	25	55.7	-6.2	87	20	35	4	42	3.60	+0.34	0.87	0	13	10	13	8	nw.	George L. Wilson.
Hammonton.....	Atlantic.....	103	15	.....	.....	.....	.....	.....	.....	.....	3.23	-0.79	1.30	0	8	19	4	8	nw.	G. H. Parkhurst.
Hightstown.....	Mercer.....	120	25	54.7	-6.4	87	20	31	4	38	3.54	-0.28	1.02	0	13	8	17	6	.....	G. Franklin Eldridge.
Imlaystown.....	Monmouth.....	185	29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. E. Bullock.
Indian Mills.....	Burlington.....	76	28	54.6	-7.4	88	20	32	4	40	3.45	-0.59	0.94	0	9	8	12	11	nw.	James M. Armstrong.
Lakewood.....	Ocean.....	54	14	53.6	-6.9	87	20	29	4	40	4.06	+0.20	1.38	0	11	7	9	15	nw.	R. W. Holman.
Moorestown.....	Burlington.....	75	55	56.0	-5.1	87	20	36	6	35	3.09	-0.94	1.16	0	8	14	10	7	nw.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	10	.....	.....	.....	.....	.....	.....	.....	4.36	.....	1.49	0	10	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	19	.....	.....	.....	.....	.....	.....	.....	3.78	+0.42	1.09	0	10	14	7	10	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	46	54.6	-6.5	85	20	38	4	31	2.90	-0.62	1.17	0	12	6	10	15	nw.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	24	54.0	-5.7	90	20	31	4	40	3.19	-0.24	1.20	0	9	12	9	10	nw.	Frank R. Austin.
Vineland.....	Cumberland.....	109	49	56.5	-5.7	87	20	36	12	35 ^a	2.08	-1.69	0.93	0	11	18	6	7	w.	H. C. Himes.
Woodbine.....	Cape May.....	43	26	56.2	-4.2	86	20	35	9	42	5.00	+1.10	2.02	0	11	12	12	7	w.	Baron de Hirsch Agr. Sch.
Philadelphia, Pa.....	.....	117	47	57.2	-5.0	86	20	41	6	27	2.96	-0.24	1.24	0	9	5	14	12	nw.	U. S. Weather Bureau.
Means and extremes...				55.4	-6.1	90	20	29	4	42	3.61	-0.23	2.02	0	10	13	9	9	nw.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	28	51.9	-6.8	86	20	37	4	37	2.72	-0.99	0.70	0	10	12	6	13	w.	Wilbur H. Pancoast.
Atlantic City.....	Atlantic.....	16	44	54.8	-2.7	87	20	38	9	33	3.32	+0.32	1.49	0	9	5	16	10	nw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	33	56.3	-2.3	88	20	38	9	32	2.39	-0.60	0.80	0	11	8	15	8	nw.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	10	53.7	.....	90	20	37	4	37	6.83	.....	2.77	0	13	7	13	11	nw.	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	19	52.6	-6.2	79	20	41	2	27	3.36	-0.62	1.29	0	11	7	13	11	nw.	U. S. Weather Bureau.
Means and extremes...				53.9	-4.5	90	20	37	4	37	3.72	-0.47	2.77	0	11	8	12	11	nw.	
For the State.....				54.0	-6.3	90	20	22	4	42	3.83	-0.15	2.77	0	11	10	10	11	nw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

* Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne.

Daily precipitation for May, 1917.																																	
Stations.	Watershead.	Day of month.																															Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
<i>The Highlands and Kittatinny Valley.</i>																																	
Belvidere.....	Delaware.....	.14			1.05	.14				.26			.03					.32					.11	.33				.18	.78	.51		3.85	
Charlotteburg.....	Passaic.....	.32		*		1.54		T.	T.	.13			.34					T.					*	.50				*	*	2.05		4.88	
Culvers Lake.....	Delaware.....	.27	.01		.01	1.33	.18	.01	.05	.01	T.		.03				T.	.12	T.				.19	.25		T.		.04	.54	.95		3.99	
Dover.....	Passaic.....	.21			* 1.15		.01			.04			.10					.09					.15	.32				*	*	1.66		3.73	
Layton.....	Delaware.....	.30			.06	.98	.26	.03	.04	.06			.04				.02	.17	T.				.08	.20		.02		.07	.31	.70		3.34	
Newton.....	Delaware.....	.11	T.		.04	1.25	.18	.01	T.	.05	T.		.05	T.				.08					.17	.43					.50	.83	T.	3.94	
Phillipsburg.....	do.....	.10			.05	.79	.09		.03	.12	T.		T.					.10					.05	.19				.24	.50			3.94	
Snssex.....	Hudson.....																												1.18	.45		3.15	
<i>The Red Sandstone Plain.</i>																																	
Bergen Point.....	Coast.....	.38			1.71	.08	T.			.09			T.				T.	1.78				T.		.42				T.	1.03	.30		5.74	
Boonton|||.....	Passaic.....	.07	.37		1.29	.10	.04	.01	.01	.08				.22				.05				T.	.10	.19	.01			T.	.27	1.68	.01	4.50	
Chatham|||.....	do.....				*	1.33	.06			T.	T.		.08										.07	.36				*	1.17	.50			
Elizabeth.....	Coast.....	.25			* 1.33	.06				T.	T.		.08					.10	T.		T.		.07	.36				*	1.17	.50		3.92	
Flemington.....	Raritan.....	.07	.11		.07	1.04		T.		T.			T.				.19	T.					.37	T.					.29	1.39	.35	3.88	
Highwood.....	Hackensack.....	.39			.10	1.39	.11	.01		.05			.03				.02	.32				T.	.08	.32				.05	.96	.26		4.09	
Jersey City**.....	Coast.....	.30			.50	.93	T.	T.		.01	T.		T.				.11				T.	*	.22	.41		T.		.28	.92	.01		3.75	
Lambertville.....	Delaware.....	.22			.11	.98	.08			.04			.01										.02	.22					.91	.53		3.12	
Little Falls**.....	Passaic.....	.31			.45	1.05	.03			.03			.03				.02	.06					.09	.27				.18	1.35	.13		4.00	
Newark**.....	Coast.....	.28			.05	.81		T.	T.	.04			.01				.05					.01	.04	.03	.22			.14	1.32	.08		3.08	
New Brunswick.....	Raritan.....	.23	.03		.07	1.33	.07			.02	.12		.01	.04			T.	.20										T.	.89	.50		3.87	
Palisades Park.....	Hackensack.....	.41	.02		* 1.36	.07	T.	T.	.09			.01					*	.23	T.				.13	.32	T.			.20	*	1.00		3.84	
Paterson.....	Passaic.....	.38	.02		.05	1.50	.03	.02		.03			T.			T.	.08	T.					.09	.30				.02	.95	.81		4.28	
Plainfield**.....	Raritan.....	.30			.50	.82		T.		.10			.12				.02	.16	T.			.04	T.	.10	.27			.20	1.71	.55		4.89	
Pompton Plains|||.....	Passaic.....	.07	.26		.14	.21	T.			.03				.08			.03						.14	.26					.29	1.51		4.02	
Somerville.....	Raritan.....	.18	.60		.07	.96	.08	T.		.06	T.		T.					.31														4.02	
South Orange.....	Rahway.....	.46			* 1.35					T.			.03					.09					.13	.26				*	1.05	.54		4.03	
New York, N. Y***.....	Coast.....	.28			.42	.77	.01	T.		.01			T.				.02	.09			T.	.06		.13	.26				*	1.24	.59		3.29
<i>The Southern Interior.</i>																																	
Bridgeton.....	Coast.....	.98			.60	.68	.05		T.	.08			T.								.11		.35				.05	.68	.25			4.37	
Barlinton.....	Delaware.....	.22			.20	1.09	.07	T.		T.			T.					T.				.19		.59	.30					1.00	.05		3.83
Clayton.....	Maurice.....	.75			.46	.87	.08	.01	T.	.03	.01	T.	T.	.01								.10		.23	.56		T.			.37	.14	T.	3.60
Hammononton.....	Mulliea.....	.31			1.30	.31		.05	T.				T.										.13	.28					.43			2.23	
Hightstown.....	Raritan.....	.20	.02		.07	1.02	.07	.01		.02							.05						.07	.48				.52	.70	.25		3.54	
Imlaystown.....	Delaware.....																																
Indian Mills.....	Mulliea.....	.38			.40	.94		T.	T.	.12			.08						T.				.42	.49	T.					.58	.04		3.4
Lakewood.....	Metedeconk.....	.45			.18	1.38	.04		T.	T.			.12				.17						.18	.32	T.				.40	.75	.07		4.06
Moorestown.....	Delaware.....	.22			.17	1.16	.06		T.				T.																.82	.14		3.09	
Northfield.....	Coast.....	.51			.51	1.49		.25	.05									.03				.32		.20	.32				.04	.95	.16		4.36
Pleasantville.....	Coast.....	.52			.90	1.09		.30	.01				T.								.16							.02	.64	.03			
Trenton***.....	Delaware.....	.27	T.		.90	.21	T.	.02		.01	T.		T.	T.				.03	T.			.16	.01	.01	.05	.22			.26	.91			3.78
Tuckerton.....	Coast.....	.3			.40	1.20		.20	.24				T.									.30		.03				.26	.91			2.90	
Vineland.....	Maurice.....	.48			.06	.93	T.	T.	.05	.01	T.		.07									.30		.03					.23	.03			3.19
Woodbine.....	Coast.....	.55			.55	2.02		.30	.10				.05											.03	.05			.01	.38	.01	T.	T.	2.08
Philadelphia, Pa..	Coast.....	.12			1.17	.07			.02				T.				T.	T.	.04		T.	T.	.13	.25				.45	.71				2.96
<i>The Sea Coast.</i>																																	
Asbury Park.....	Coast.....	.30			.70	.50		T.	T.				T.				.03	.01					.10	.08	.50	T.			.10	.40	T.		2.72
Atlantic City***.....	do.....	.53			1.28	.22		.29	T.	T.			.04	T.								.22		.01					.07	.14	.22		2.72
Cape May City.....	do.....	.21			.80	.39		.26	.03				.01									.19						.37	.36			3.32	
Long Branch**.....	do.....	.36			.78	1.99	.06	T.	T.	.16			.09				.02	.34										.07	.14	.22		2.39	
Sandy Hook***.....	do.....	.27			.58	.73			.04				T.				.01	.09	T.				.02	.02	.58	T.		.33	.69			3.36	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded.
||| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.
* Precipitation included in the next following measurement. **Precipitation for 24-hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.														
Stations.	Pressure.					Wind.			Moisture.		Sun- shine			
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	Percentage of possible sunshine.		
							Miles per hour.	Direction.	Date.					
Atlantic City.....	29.86	30.28	31	29.57	16	9	36	ne.	5	69	71	59		
Cape May City.....	29.82	30.29	31	29.61	28	8	26	e.	4	74	66	50		
Long Branch.....	29.85	30.28	31	29.51	11	18	64	ne.	5	67*	61†	56		
Newark.....	29.83	30.26	31	29.53	11	18	58	nw.	10	68	60	49		
New York, N. Y.....	29.83	30.25	31	29.54	11									
Palisades Park.....	29.87	30.27	31	29.57	28	11	36	n.	12	63	56	51		
Philadelphia, Pa.....	29.83	30.27	31	29.52	11	16	48	nw.	10	78	75	53		
Sandy Hook.....	29.84	30.25	31	29.55	11	13	45	nw.	2	69	61	51		
Monton.....														

Daily temperatures for May, 1917.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
<i>The Highlands and Kittatinny Valley</i>																																	
Belvidere.....	Maximum...	55	59	55	57	42	50	55	55	60	57	67	59	61	73	66	62	70	76	83	84	76	61	64	63	64	76	79	60	56	79	75	64.5
	Minimum...	42	36	44	28	38	38	41	41	39	37	37	40	41	44	46	35	46	36	71	70	78	67	63	61	59	57	70	65	49	53	47	41.2 ^a
Charlotteburg.....	Maximum...	41	55	46	44	44	47	46	49	53	54	57	47	54	64	60	52	65	71	70	78	67	63	61	59	57	70	65	49	53	73	74	57.7
	Minimum...	38	30	37	26	37	36	38	38	38	39	40	38	39	45	40	36	40	32	55	44	45	47	44	32	41	43	52	47	45	48	38	40.5
Dover.....	Maximum...	43	56	48	58	41	48	52	51	60	55	62	59	56	71	61	58	66	72	79	83	72	56	61	60	60	75	78	55	55	75	74	61.3 ^a
	Minimum...	39	34	37	27	37	36	40	40	37	38	43	40	40	46	42	36	45	38	55	49	47	47	47	34	43	44	54	43	46	48	43	41.8
Layton.....	Maximum...	46	54	47	58	45	49	52	54	59	50	64	60	60	71	61	53	64	71	81	82	71	58	63	60	60	77	64	56	56	77	76	61.3 ^a
	Minimum...	41	34	37	25	38	37	39	41	40	40	40	40	39	47	44	36	40	31	50	53	44	48	48	31	38	36	52	49	45	49	40	41.0
Newton.....	Maximum...	44	54	51	55	42	47	52	50	57	51	60	59	57	68	59	55	65	70	78	80	71	59	60	59	56	72	70	55	53	74	73	59.9
	Minimum...	39	37	39	31	36	35	39	39	40	37	38	39	39	46	41	40	42	41	55	52	45	47	47	38	41	44	44	47	44	48	50	41.9
Phillipsburg.....	Maximum...	49	60	55	55	45	51	54	55	59	56	66	61	61	71	68	63	69	79	85	86	76	70	63	63	61	76	81	70	57	78	77	65.2
	Minimum...	42	39	41	31	39	37	42	41	42	38	42	41	42	47	48	38	49	39	57	52	49	49	48	37	44	43	55	50	47	49	50	44.1
Sussex.....	Maximum...																																
	Minimum...																																
<i>The Red Sandstone Plain.</i>																																	
Bergen Point.....	Maximum...	46	62	56	58	45	49	56	56	62	56	63	62	73	64	58	68	71	73	87	73	58	65	64	63	74	73	64	59	74	69	63.4 ^a	
	Minimum...	41	41	43	43	39	37	40	40	40	41	38	41	40	49	48	41	44	44	55	56	50	48	40	45	42	43	43	48	48	49	49	44.1 ^b
Boonton§§.....	Maximum...	58	58	52	58	47	50	58	53	60	56	63	61	60	72	62	58	67	73	81	84	73	55	64	63	61	73	76	53	58	78	74	63.2
	Minimum...	40	37	35	27	38	38	40	33	39	42	43	41	42	48	49	38	38	36	49	45	48	49	47	32	45	47	50	51	46	48	43	42.1
Elizabeth.....	Maximum...	47	61	58	59	44	52	56	56	63	59	68	65	63	76	69	58	72	75	83	87	76	67	68	63	63	77	78	62	60	80	75	65.8
	Minimum...	43	39	38	31	40	40	42	38	41	39	41	39	37	47	46	39	43	40	59	48	47	50	49	40	46	43	54	52	47	46	43	43.4
Flemington.....	Maximum...	47	62	56	53	44	50	54	53	62	58	68	63	59	73	67	63	70	77	83	87	76	75	66	63	64	75	80	60	60	80	73	65.2
	Minimum...	44	36	40	30	40	38	42	40	40	40	44	40	42	48	47	35	47	38	57	49	50	51	49	34	46	43	54	49	48	50	47	43.9
Highwood.....	Maximum...	44	60	54	57	44	50	55	54	61	58	65	60	59	73	64	55	68	69	80	84	74	62	66	63	61	75	71	57	55	71	69	62.5
	Minimum...	41	36	35	28	40	39	40	36	40	41	37	36	46	41	38	41	37	53	49	45	49	46	47	48	37	47	41	55	47	46	49	42.1
Jersey City.....	Maximum...	46	60	56	53	44	49	54	55	61	59	67	63	60	76	66	58	71	67	75	87	73	60	65	63	61	77	73	59	59	74	67	63.2
	Minimum...	40	39	43	38	41	40	43	43	45	43	44	43	43	49	51	46	45	47	58	53	53	51	49	46	47	48	57	50	48	52	52	46.7
Lambertville.....	Maximum...	59	57	52	48	50	53	55	56	54	65	56	60	72	68	63	66	75	82	84	77	70	62	62	61	73	79	77	59	59	79	76	64.6
	Minimum...	45	40	44	34	41	39	44	42	42	42	42	42	43	48	47	40	50	42	59	54	52	46	50	41	49	44	56	53	50	50	53	46.0
Little Falls.....	Maximum...	46	58	52	60	45	54	54	56	62	59	64	62	60	72	63	60	67	72	74	73	78	59	64	65	61	77	80	56	59	76	74	63.3 ^a
	Minimum...	40	38	30	32	39	39	40	42	42	42	42	40	40	40	38	52	55	48	50	46	34	42	53	55	47	48	49	48	49	55	43.5 ^b	
Newark.....	Maximum...	46	59	52	54	44	49	52	53	60	56	65	60	59	72	62	59	70	71	79	86	77	56	65	63	61	74	76	55	59	76	70	62.6
	Minimum...	41	39	42	39	39	39	43	42	44	43	45	44	44	51	49	47	45	48	57	54	54	49	49	46	47	49	55	48	58	56	54	46.8
New Brunswick.....	Maximum...	46	58	58	55	43	48	53	50	58	55	65	63	58	71	66	60	68	76	76	86	77	68	63	63	62	73	79	61	60	76	74	63.6
	Minimum...	42	39	42	32	39	39	41	39	41	42	41	41	40	46	47	39	44	41	58	50	51	49	48	40	46	44	54	49	48	47	52	44.2
Palisades Park.....	Maximum...	45	58	52	57	43	49	52	53	59	56	63	60	59	72	62	56	68	68	79	84	74	53	65	63	60	75	71	54	57	73	68	61.5
	Minimum...	40	36	36	30	40	39	41	37	41	43	43	43	43	46	45	38	41	39	54	49	48	48	39	46	41	54	48	47	46	49	42	42.9
Paterson.....	Maximum...	47	60	56	58	45	50	54	54	63	58	65	63	60	76	67	58	71	73	83	87	80	69	66	65	63	78	74	65	58	79	74	65.1
	Minimum...	42	36	39	34	40	40	42	40	43	43	43	43	43	49	50	43	43	44	58	50	52	51	49	39	47	47	55	49	48	50	52	45.3
Plainfield.....	Maximum...	46	60	55	57	44	49	53	54	61	58	68	63	59	74	65	60	69	75	79	87	73	63	65	64	63	74	79	59	60	77	74	64.1
	Minimum...	42	37	38	31	40	39	42	38	42	41	43	42	41	47	49	38	45	38	52	49	50	50	49	36	47	43	54	49	47	49	49	43.8
Somerville.....	Maximum...	48	60	58	56	46	50	58	55	60	55	66	61	59	70	66	61	69	77	78	85	81	67	64	62	75	80	70	61	80	77	71	65.1
	Minimum...	42	34	38	27	39	37	39	35	36	37	41	40	39	46	41	31	44	33	52	45	46	50	47	30	44	37	51	48	45	48	44	40.8
South Orange.....	Maximum...	47	59	53	55	43	49	51	53	59	55	65	60	58	71	62	58	68	73	77	83	72	57	65	64	60	73	74	56	59	75	71	62.1
	Minimum...	41	37	41	33	39	39	42	39	42	41	43	42	42	49	49	40	45	41	55	51	49	49	39	46	44	54	47	47	49	49	49	44.4
New York, N. Y.....	Maximum...	47																															



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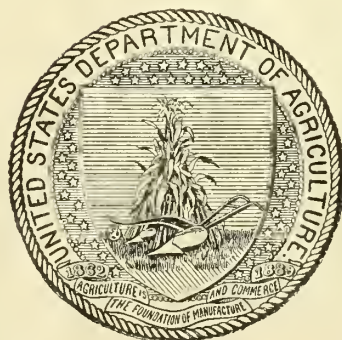
MAY 6 1917

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

JUNE, 1917.

BY
G. HAROLD NOYES
METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
JULY 21, 1917.

Departure of the Mean Temperature from the Normal, June, 1917.



Shaded portions show excess (+).
Unshaded portions show deficiency (-).
Lines show amount of excess or deficiency.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

VOL. XXX. TRENTON, N. J., JUNE, 1917. No. 6.

GENERAL SUMMARY.

Following the coldest May on record in New Jersey, the month of June resulted in figures of temperature and precipitation that closely approach normal. Temperatures were slightly subnormal during the second decade, but at other times it was sufficiently warm to overcome the deficit, except along the shore and in the extreme northern counties. The mornings of the 5th and 18th, temperatures fell almost to freezing at the ground surface of some of the cranberry bogs, but there was no frost. Days with rain were distributed with fairly uniform regularity the first half of the month, but from the 16th to the 22d, there was practically no rain; on the 23d and 24th it rained over the northern half, and on the 27th and 29th, throughout the State. The thunderstorm of the 14th, which attended the lowest barometer readings of the month, was notably heavy over Jersey City and Upper New York Bay. At 2:15 p. m., the heaviest downpour commenced, amounting to 1.10 inches in 15 minutes, 1.90 inches in 30 minutes, 2.15 inches in an hour, and about 3.78 inches in 2 hours. The record in lower New York City was very nearly the same, and was the heaviest June record for a 24-hour period.

The extreme highest and lowest monthly temperatures were well within the records of former years, and there were no remarkable features of the weather during the month.

Crop growth regained much of its backwardness due to a cold spring, and as a rule, presented an unusually favorable aspect at the close of the month. Hay, pasturage and wheat were so unfavorably affected last fall, winter and spring that their recovery was less satisfactory.

The mean stage of the Delaware River at Phillipsburg was 4.7 feet, the highest being 9.3 feet on the 13th, and the lowest, 3.2 feet on the 2d. At Trenton the mean daily stage was 3.2 feet, which was 1.3 feet above normal, and the highest June average on record (13 years). The highest was 5.9 feet on the 13th, and the lowest, 2.3 feet on the 2d, 6th and 7th.

The temperature departure from normal for the year 1917, to date, by section, is: The Highlands, -1.4° ; Red Sandstone Plain, -1.1° ; The Southern Interior, -0.9° ; The Seacoast, -1.2° . The precipitation accumulated departure from normal for the year 1917, to date, is: The Highlands, -3.07 ; Red Sandstone Plain, -3.71 ; The Southern Interior, -1.73 ; The Seacoast, -1.69 .

There were no displays of storm warnings during the month.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 36 stations, was 68.9° , which was 0.1° below normal. The highest temperature was 95° at Little Falls and Luckertown on the 24th and 27th, respectively, and the lowest, 60° at Charlotteburg on the 5th. The highest monthly mean temperature was 72.6° at Bridgeton, and the lowest, 63.8° at

Charlotteburg. The greatest daily range of temperature was 41° at Indian Mills on the 5th. As a general rule, the middle sections of the Delaware valley and the central portions of the State were slightly above normal in warmth, while northern and southern sections were a little deficient. The greatest deficiency of temperature was along the shore of Monmouth County.

PRECIPITATION.

The average total rainfall of the State, as deduced from observations of 41 stations, was 4.27 inches, which was 0.35 inch above normal. The greatest monthly amount of rainfall was 7.14 inches at Long Branch, and the least, 2.80 inches at South Orange. The greatest amount of rainfall in 24 consecutive hours was 4.12 inches at Jersey City on the 14th-15th. The distribution of excess and deficiency of rainfall was generally uniform, the most marked area of deficiency being from the western portions of Cumberland County northward to Morris County. The average number of days on which 0.01 inch or more rain fell was 12, which was 3 more than normal.

WIND.

The prevailing wind direction was from the southwest, with an approximate velocity of 10 miles per hour, which was the same as last June. The highest velocity, sustained for 5 consecutive minutes, was 56 miles per hour from the west on the 8th, at Long Branch. High winds were also noted on the 3d, 5th, 7th, 17th, 20th, 24th and 26th.

SUNSHINE AND CLOUDINESS.

The average number of clear days throughout the State was 13, which was 1 more than normal; partly cloudy, 10, which was 1 less than normal; cloudy, 7, which was normal. The approximate percent. of possible sunshine was 62, and was probably about normal.

COMPARATIVE DATA FOR JUNE.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more prec.
1885.....	68.7	97	39	1.79	3.37	0.72	.....	.....	.....	.....
1886.....	67.1	91	41	3.38	5.79	2.22	.....	.....	.....	.....
1887.....	68.2	97	42	6.77	10.29	4.21	.....	.....	.....	.....
1888.....	70.8	99	39	2.59	5.69	1.67	.....	.....	9	10
1889.....	69.9	91	40	3.73	6.75	2.39	.....	.....	5	6
1890.....	70.7	95	42	3.59	5.16	0.99	.....	.....	10	10
1891.....	69.7	102	38	2.92	6.71	1.24	14	9	6	7
1892.....	72.4	98	44	3.85	6.12	1.58	10	12	8	5
1893.....	69.7	103	40	2.95	7.02	0.46	10	11	9	11
1894.....	70.6	102	35	2.28	5.90	0.99	14	11	9	8
1895.....	71.7	103	39	3.24	5.99	0.93	11	11	5	9
1896.....	68.1	96	37	5.46	13.45	2.64	12	10	8	10
1897.....	66.1	95	35	3.38	5.50	2.12	10	13	7	10
1898.....	70.1	100	38	2.10	3.54	1.13	14	12	4	7
1899.....	72.3	103	38	2.50	4.34	1.01	15	10	5	8
1900.....	70.4	97	39	3.08	4.91	1.10	12	12	6	8
1901.....	70.0	103	35	1.57	4.36	0.73	18	8	4	5
1902.....	67.5	99	37	6.57	10.21	4.54	14	11	5	11
1903.....	64.0	92	37	7.68	15.02	2.39	6	10	14	15
1904.....	68.6	100	34	3.13	5.44	1.91	13	10	7	12
1905.....	68.3	96	35	3.43	8.71	1.67	11	12	7	10
1906.....	70.4	98	38	4.48	9.18	1.45	11	12	7	12
1907.....	64.7	96	31	4.41	6.85	3.15	12	10	8	10
1908.....	69.9	99	35	2.32	4.63	0.77	16	12	2	4
1909.....	70.0	99	36	3.26	5.70	1.71	9	10	11	12
1910.....	66.9	95	34	5.17	8.01	2.66	9	10	11	13
1911.....	68.9	97	40	5.36	10.11	2.84	9	12	9	14
1912.....	68.0	98	33	1.94	3.61	0.91	9	12	9	14
1913.....	69.1	98	31	1.80	3.76	0.68	19	8	3	5
1914.....	68.5	98	35	2.66	4.85	1.09	16	9	6	7
1915.....	67.0	95	36	3.12	6.51	1.40	13	10	7	11
1916.....	64.7	87	36	4.20	5.99	2.22	10	9	11	13
1917.....	68.9	95	40	4.27	7.14	2.80	13	10	7	12

Climatological data for June, 1917.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.							Precipitation, in inches.				No. of days.				Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation .01 in. or more.	Clear.	Pt. cloudy.	Cloudy.		Prevailing direction of wind.
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	26	69.2	+0.2	88	22	49	5	35	5.74	+1.34	.....	0	10	19	9	2	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	25	63.8 ^a	-1.7	82	19	40	5	33	5.13	+0.87	1.50	0	14	14	13	3	w	George S. Briggs.
Culvers Lake†.....	Sussex.....	848	16	.....	.....	.....	.....	42	17	.....	5.58	+1.74	1.08	0	18	19	4	7	e	Brice E. Riker.
Dover.....	Morris.....	600	33	67.4	+0.2	88	22	46	18	35	3.93	-0.19	0.85	0	13	2	16	12	.....	William C. Harris.
Layton.....	Sussex.....	480	17	65.2	-1.1	84	19	42	18	35	5.20	+1.78	1.12	0	19	10	8	12	sw.	A. M. Depue.
Newton.....	Sussex.....	769	36	66.9	-0.8	84	22	48	17†	29	5.84	+2.05	1.13	0	18	9	9	12	sw.	Irving G. Kern.
Phillipsburg.....	Warren.....	363	35	69.8	+0.1	89	19†	47	17†	34	4.55	+0.40	1.21	0	15	14	9	7	sw.	D. Wilson Smith.
Sussex.....	Sussex.....	442	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Means and extremes.....		.....	.....	67.0	-0.5	89	19†	40	5	35	5.14	+1.14	1.50	0	15	12	10	8	sw.	.....
<i>The Red Sandstone Plain.</i>																				
Bergen Point††*.....	Hudson.....	37	20	69.4 ^d	+0.6	89	22	50 ^e	5	32	4.85	+0.90	2.35	0	11	7	21	2	se.	William H. Mitchell.
Boonton.....	Morris.....	400	27	67.8	.....	88	21†	44	5	35	3.67	-0.07	1.22	0	15	23	2	5	sw.	J. W. Demmers.
Chatham.....	Morris.....	330	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Miss M. A. Butler.
Elizabeth.....	Union.....	45	38	70.4	-0.8	92	22	47	18	36	3.24	-0.36	1.26	0	9	7	14	9	sw.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	29	69.8	+0.7	89	22	47	18	36	3.87	-0.50	0.85	0	13	17	8	5	sw.	Hiram E. Deats.
Highwood.....	Bergen.....	90	28	67.6	-0.7	86	22	47	18	33	5.00	+1.22	1.85	0	12	6	18	6	s.	Charles J. Bates.
Jersey City.....	Hudson.....	10	18	70.4	+0.4	90	22	52	1	28	5.88	+2.58	4.12	0	12	8	11	11	se.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	30	70.4	+0.1	88	22	50	18	29	4.08	-0.20	1.68	0	11	13	15	2	sw.	Samuel W. Cochran.
Little Falls.....	Passaic.....	180	14	70.1	.....	95	24	49	18	32	3.85	-0.43	1.25	0	13	11	5	14	.....	Montclair Water Co.
Newark.....	Essex.....	159	75	70.4 ^e	+0.7	87	22	54 ^h	18	.....	3.80	+0.17	1.72	0	11	11	8	11	w.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	110	64	69.0	-0.6	88	22	48	5	32	3.62	-0.15	1.69	0	12	18	8	4	sw.	N. J. Experiment Station.
Palisades Park.....	Bergen.....	80	2	68.4	.....	89	22	48	18	33	4.90	.....	1.86	0	15	9	16	5	se.	George P. Kirsten.
Paterson.....	Passaic.....	80	46	70.5	+0.4	91	22	51	5†	32	2.93	-1.39	0.90	0	12	3	3	24	se.	Marion T. Probert.
Plainfield.....	Union.....	100	31	69.2	-0.1	88	22	47	18	34	4.05	-0.08	1.56	0	12	8	14	8	sw.	John Neagle.
Pompton Plains.....	Morris.....	195	15	.....	.....	.....	.....	.....	.....	.....	3.98	-0.18	0.94	0	14	.....	.....	.....	.....	M. S. Taylor
Somerville.....	Somerset.....	60	35	68.2	-1.0	89	22	43	18	38	3.93	-0.22	0.95	0	11	13	7	10	sw.	A. A. Maedonald.
South Orange.....	Essex.....	200	47	69.5	+0.7	87	22	52	1†	28	2.80	-0.76	0.81	0	10	10	12	8	w.	Dr. W. J. Chandler.
New York, N. Y.....	.....	365	47	68.3	-0.2	87	22	53	1	22	5.57	+2.31	3.88	0	11	4	14	12	s.	U. S. Weather Bureau.
Means and extremes.....		.....	.....	69.4	0.0	95	24	43	18	38	4.03	+0.04	4.12	0	12	11	11	8	sw.	.....
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	36	72.6	-0.8	94	27	51	17	32	3.68	-0.09	1.53	0	8	19	7	4	sw.	Henry A. Jorden.
Burlington.....	Burlington.....	12	31	71.6	+0.9	90	14	50	18	32	3.08	-0.84	1.10	0	11	23	6	1	sw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	George L. Wilson.
Hammonton.....	Atlantic.....	103	15	.....	.....	.....	.....	.....	.....	.....	3.29	+0.10	1.01	0	8	26	3	1	sw.	G. H. Parkhurst.
Hightstown.....	Mercer.....	120	25	70.9 ^b	+1.5	89	22	46	18	36	3.53	-0.48	1.44	0	9	.....	.....	.....	.....	G. Franklin Eldridge.
Imlaystown.....	Monmouth.....	185	29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. E. Bullock.
Indian Mills.....	Burlington.....	76	28	70.0	-1.0	92	27	42	5	41	4.91	+1.12	1.41	0	8	9	17	4	s.	James M. Armstrong.
Lakewood.....	Ocean.....	54	14	69.4	+1.8	89	27†	44	5	36	4.00	+0.33	1.85	0	9	9	10	11	sw.	R. W. Holman.
Moorestown.....	Burlington.....	75	55	71.0	+0.8	90	27	52	17	28	3.50	-0.30	1.03	0	8	16	13	1	se.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	10	.....	.....	.....	.....	.....	.....	.....	4.76	.....	2.12	0	10	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	19	.....	.....	.....	.....	.....	.....	.....	4.71	+0.94	1.95	0	10	18	6	6	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	46	70.5	+1.0	88	22	52	17	27	3.15	-0.34	1.07	0	10	6	10	14	s.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	24	69.3	+0.3	95	27	44	5	39	3.67	-0.10	1.02	0	11	12	15	3	.....	Frank R. Austin.
Vineland.....	Cumberland.....	109	49	71.6 ^a	0.0	93	27	51	5	29	3.61	+0.03	1.60	0	9	.....	.....	.....	.....	H. C. Himes.
Woodbine.....	Cape May.....	43	26	70.8	+1.8	92	27	48	5	34	5.51	+2.01	1.94	0	10	17	12	1	se.	Baron de Hirsch Agr. Sch.
Philadelphia, Pa.....	.....	117	47	72.2	+1.0	90	27	54	17	24	2.25	-1.05	1.20	0	9	10	9	11	sw.	U. S. Weather Bureau.
Means and extremes.....		.....	.....	70.8	+0.6	95	27	42	5	41	3.95	+0.20	2.12	0	9	15	10	5	sw.	.....
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	28	64.0	-4.2	87	27	52	1†	32	3.78	-0.02	1.38	0	9	13	7	10	se.	Wilbur H. Pancoast.
Atlantic City.....	Atlantic.....	16	44	66.4	-0.4	92	24	54	17	28	4.29	+1.26	1.46	0	8	9	11	10	s.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	33	66.2	-1.5	92	24	55	5	30	4.03	+0.99	1.28	0	13	12	12	6	s.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	10	64.0 ^a	.....	89	27	48	5	30	7.14	.....	3.59	0	10	14	10	6	s.	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	19	67.2	-1.2	83	24	53	1	22	4.03	+0.06	0.97	0	11	8	13	9	sw.	U. S. Weather Bureau.
Means and extremes.....		.....	.....	65.6	-1.8	92	24	48	5	32	4.65	+0.57	3.59	0	10	11	11	8	s.	.....
For the State.....		.....	.....	68.9	-0.1	95	24†	40	5	41	4.27	+0.35	4.12	0	12	13	10	7	sw.	.....

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

* Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne.

Stations.	Watershead.	Day of month.																																Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>The Highlands and Kittatinny Valley.</i>																																		
Belvidere.....	Delaware	*	.64				.21	.39			*	1.57			.80										1.00			.38		.75			5.74	
Charlotteburg.....	Passaic	.37	.20	.08			*	.43	.12		.26	.27			.50	.70			.05				T.		1.50			.65		.50			5.13	
Culvers Lake.....	Delaware	.22	.21	.28		.01	.02	.64	.02		.64	1.08	.13		.50	.07				.09		.05	T.		.65		.28	.48	.39			5.58		
Dover.....	Passaic	*	.50			.07		.27			.11	*	.72		.85	.01							.10		.17			.55	.58			3.93		
Layton.....	Delaware	.10	.62	.03		.25	.07	.23	.03		.22	.64	.17		.55	.03	T.			.14		.14	.03	1.12		.03	.43		.37			5.20		
Newton.....	Delaware	.18	.46	.34		.03	.02	.23	.02	.01	.43	1.13	.29	T.	.46	.08				.05		.02			.91			.94	.24			5.84		
Phillipsburg.....	do	.48	.10			.05	.54	.63		.16	.05	1.04	.17		.35	.19	.01					T.			.26			.36	.16			4.55		
Sussex.....	Hudson																																	
<i>The Red Sandstone Plain.</i>																																		
Bergen Point.....	Coast	.25	.03					.28			.06	.62			2.35	.06							T.	.04	.16			.41		.59			4.85	
Bounton 	Passaic	.17	.18	T.			.02	.17	.05	.14	.04	.08	.13		.01	1.22	T.						T.	.36			.51		.33	.26			3.67	
Chatham 	do																																	
Elizabeth.....	Coast	.20	.01			T.		.36	T.		.05	.52	T.		1.26	T.							T.		.18			.17		.49			3.24	
Flemington.....	Raritan	.31	.06			T.	.04	.76		.08	.09	.85	.15		.15	.16						T.		.11			.58		.53				3.87	
Highwood.....	Hackensack	.42	.05			T.	T.	.22		.08	.05	.59			1.81	.04				.06					.43		T.	.28		.97			5.00	
Jersey City**.....	Coast	.35	.01			T.	.01	.23	T.		.02	.52		T.	4.11	.01							.08		.13			.14		.27			5.88	
Lambertville.....	Delaware	.05	.45				.14	.63		.06	1.68				.31	.07									.10			.14		.45			4.08	
Little Falls**.....	Passaic	.25	.05			.02	T.	.14		.04	.06	.13			1.20	.05				T.					.90	.28								

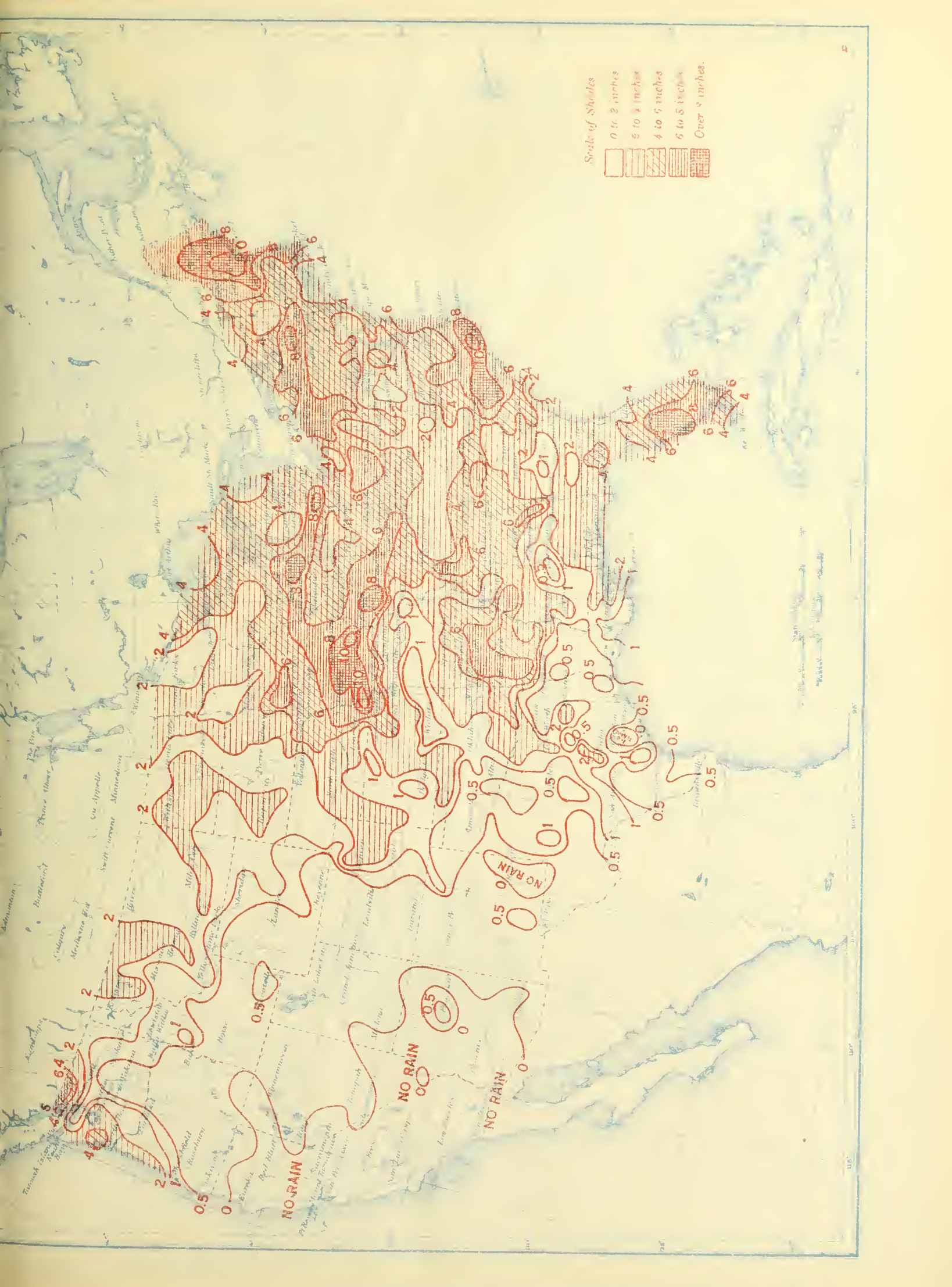
|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. † Separate dates of falls not recorded.
* Precipitation included in the next following measurement. ** Precipitation for 24-hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

Stations.	Pressure.					Wind.			Moisture.		Sun- shine	
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	
							Miles per hour.	Direction.	Date.			
lantie City.....	30.04	30.33	13	29.79	14	7	24	s.	14	82	86	65
ape May City.....	30.06	30.34	13	29.88	10	7	28	w.	29	78	86	65
ong Branch.....	30.03	30.33	13	29.73	14	14	56	w.	3	78	59	65
ewark.....	30.04	30.25	13	29.83	24	14	36	w.	3	70*	57†	63
ew York, N. Y.....	30.01	30.32	13	29.75	14	14	52	nw.	3	78	71	63
ilades Park.....	30.02	30.32	13	29.75	14							
iladelphia, Pa.....	30.03	30.33	13	29.75	14	9	31	w.	3	74	66	65
ndy Hook.....	30.00	30.34	13	29.71	14	12	40	s.	7	87	84	66
enton.....	30.00	30.31	13	29.68	14	10	39	w.	8	80	68	57

* 7 a. m. † 9 p. m. ‡ 5 p. m.

Daily temperatures for June, 1917.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.	
<i>The Highlands and Kittatinny Valley</i>																																	
Belvidere.....	Maximum...	69	79	80	80	80	78	76	81	82	78	72	83	80	84	74	75	70	84	87	87	80	88	86	85	81	82	84	87	86	82	80.7	
	Minimum...	53	53	53	52	49	59	50	53	59	59	64	64	65	65	58	53	61	66	59	52	60	56	59	60	53	53	65	60	61	53	57.7	
Charlotteburg.....	Maximum...	59	68	73	73	73	70	71	75	71	64	79	71	66	68	66	75	82	80	80	77	80	72	76	72	81	80	70	75	73	73.1	73.1	
	Minimum...	48	56	57	52	40	59	57	59	57	59	60	60	60	58	55	53	49	42	56	49	54	47	59	59	49	59	59	55	51	54.6		
Dover.....	Maximum...	63	73	79	79	79	78	77	73	80	82	76	67	79	75	75	69	70	79	79	82	86	83	86	80	79	84	82	79	79	79	77.9	
	Minimum...	52	57	59	52	45	60	58	59	59	61	62	63	60	58	56	58	48	46	60	55	59	53	60	60	53	56	63	60	60	54	56.9	
Layton.....	Maximum...	67	68	77	82	79	79	75	79	82	72	69	83	80	81	75	62	69	76	84	82	83	75	74	74	68	72	72	69	74	75	75.2	
	Minimum...	52	58	58	51	44	58	59	55	55	62	64	62	62	62	54	51	48	42	57	53	58	50	55	62	50	47	62	58	59	50	55.3	
Newton.....	Maximum...	64	82	77	75	77	76	71	77	79	75	71	79	78	79	70	65	70	77	81	81	83	89	80	81	76	78	83	79	80	76	76.5	
	Minimum...	52	57	59	52	52	58	58	61	58	61	62	64	62	62	51	50	48	48	58	60	61	57	61	62	53	54	62	60	61	54	57.3	
Phillipsburg.....	Maximum...	70	80	80	81	81	79	76	82	83	80	75	84	82	85	74	69	74	81	89	87	87	89	86	85	81	83	86	84	83	82	81.3	
	Minimum...	52	60	64	54	50	60	60	59	59	63	64	63	64	63	57	53	47	47	58	58	60	56	61	64	54	55	65	63	63	54	58.3	
Sussex.....	Maximum...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
	Minimum...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
<i>The Red Sandstone Plain.</i>																																	
Bergen Point.....	Maximum...	65	70	82	78	82	78	84	84	78	70	76	76	72	72	74	80	85	81	83	83	89	83	87	81	82	85	82	84	82	80.5		
	Minimum...	55	55	50	59	58	59	61	60	60	60	57	59	59	60	59	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	
Boonton§§.....	Maximum...	62	74	79	81	79	81	75	81	79	77	71	83	76	78	76	73	72	79	84	84	88	88	85	85	82	81	85	86	81	80	79.5	
	Minimum...	47	55	61	53	44	57	58	57	59	61	62	62	59	57	54	52	45	59	54	57	53	58	63	52	51	63	63	60	52	56.2		
Elizabeth.....	Maximum...	66	72	84	83	84	82	77	85	86	81	76	79	75	75	76	77	83	87	89	88	92	88	90	85	85	86	87	87	84	82	83.3	
	Minimum...	53	55	57	51	49	60	58	62	60	60	61	62	64	60	60	59	57	52	47	60	56	60	57	64	65	55	57	65	69	63	55	58.4
Flemington.....	Maximum...	70	75	81	80	79	80	73	80	82	77	74	81	80	85	71	69	74	83	86	83	88	89	87	88	85	80	84	87	82	81	80.5	
	Minimum...	53	58	60	53	57	62	60	60	60	64	64	64	61	63	60	55	51	47	58	56	60	57	63	65	55	56	66	65	64	56	59.1	
Highwood.....	Maximum...	60	69	81	78	77	78	73	81	82	72	69	77	70	75	68	73	73	80	83	82	81	86	85	83	76	80	84	82	77	80	77.2	
	Minimum...	54	56	57	51	49	57	57	61	60	61	62	63	61	60	57	57	53	47	60	59	61	58	61	65	54	56	64	60	62	54	57.9	
Jersey City.....	Maximum...	63	72	84	79	79	79	75	84	83	75	68	77	70	80	74	74	76	83	85	82	90	86	88	83	82	86	86	83	81	79.7	79.7	
	Minimum...	52	56	59	57	55	60	58	62	64	63	62	63	61	60	61	59	55	55	65	64	65	63	67	66	61	64	65	67	65	59	61.1	
Lambertville.....	Maximum...	72	75	78	78	78	80	75	76	83	78	76	81	80	85	71	70	75	74	83	84	85	88	87	84	81	81	85	82	84	81	79.9	
	Minimum...	55	58	63	55	53	62	61	62	61	65	65	64	62	64	63	58	52	50	61	62	64	60	67	66	58	61	67	67	66	57	61.0	
Little Falls.....	Maximum...	64	73	81	80	79	81	80	85	85	83	74	77	77	77	75	72	81	87	87	88	85	87	95	81	83	87	84	82	81	81.3	81.3	
	Minimum...	52	52	52	58	50	60	59	63	60	63	64	64	63	61	59	58	51	49	61	58	61	58	60	63	56	56	67	66	62	61	58.9	
Newark.....	Maximum...	64	70	86	82	82	81	75	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	
	Minimum...	56	57	59	57	55	60	59	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64	
New Brunswick.....	Maximum...	69	72	81	77	80	79	73	82	83	79	72	81	72	87	70	73	80	85	84	85	88	86	85	81	79	84	81	85	80	79.4	79.4	
	Minimum...	52	54	58	53	48	62	58	61	59	62	62	63	60	59	57	52	51	59	60	59	64	65	66	58	65	66	64	64	56	58.7	58.7	
Palisades Park.....	Maximum...	62	70	81	80	78	79	76	82	83	73	71	73	70	75	70	74	73	81	85	83	82	89	85	86	81	81	85	84	81	80	78.4	78.4
	Minimum...	54	55	57	50	51	59	58	61	61	62	62	63	61	60	59	57	53	48	61	59	62	58	61	61	55	58	64	63	64	54	58.4	58.4
Paterson.....	Maximum...	64	71	84	82	83	82	78	85	86	78	73	81	73	80	74	75	76	83	86	88	88	91	87	89	83	84	88	85	80	82	81.3	81.3
	Minimum...	53	57	58	55	51	62	59	63	62	63	63	63	61	59	59	58	53	51	62	59	63	61	65	65	59	59	64	64	64	56	59.7	59.7
Plainfield.....	Maximum...	67	73	82	78	81	79	74	83	82	78	78	81	72	83	71	74	81	85	85	86	88	85	86	81	80	84	82	84	84	80	79.8	79.8
	Minimum...	52	56	59	52	48	61	59	62	60	61	63	64	60	60	59	57	58	47	61	57	61	57	62	65	56	58	65	64	64	54	58.7	58.7
Somerville.....	Maximum...	70	75	81	78	81	80	73	83	83	79	75	83	75	86	73	71	73	81	86	84	88	89	87	86	82	81	85	84	84	81	80.6	80.6
	Minimum...	48	54	57	51	44	59	57	58	56	61	61	62	59	60	57	55	49	43	55	52	61	63	58	63	53	53	60	60	51	55.8	55.8	
South Orange.....	Maximum...	63	72	80	78	80	79	75	81	82	78	72	78	72	78	71	72	74	79	83	84	84	87	84	86	81	81	85	83	83	80	78.8	78.8
	Minimum...	52	57	59	55	52	61	59	64	61	62	63	64	61	61	59	57	57	57	63	60	61	59	63	66	58	62	66	65	65	57	60.2	60.2
New York, N. Y.....	Maximum...	62	70	79	78	74	77	72	80	79	74	6																					



N J

U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU

CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

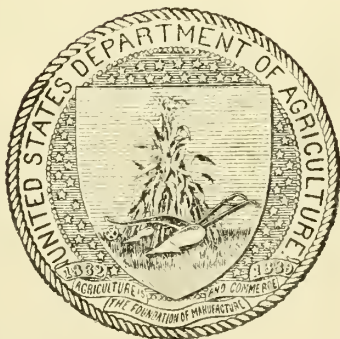
NEW JERSEY SECTION

JULY, 1917.

BY

G. HAROLD NOYES

METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
AUGUST 18, 1917.

Departure of the Mean Temperature from the Normal, July, 1917.



Shaded portions show excess (+).
Unshaded portions show deficiency (-).
Lines show amount of excess or deficiency.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

VOL. XXX.

TRENTON, N. J., JULY, 1917.

No. 7.

GENERAL SUMMARY.

There has never been a July since 1885, when monthly averages of temperature were first secured in New Jersey, that has been below 70°, and it has averaged as high as a fraction above 77°. In July of 1917, with both temperature and amount of rain, within a few points of normal, it would be assumed that there might be few, if any, outstanding weather features during the month that were worthy of comment. Midsummer heat reaches its culmination about the third week of July, and thereafter diminishes slowly. There have been but few instances where August has been warmer than July in New Jersey in consecutive months. The average amount of rain is practically the same in July and August, with a maximum of frequency and amount probably lasting over into the first few days of August, and diminishing with comparative rapidity thereafter.

This month of July, temperatures were mostly subnormal the earlier part of the month, and above normal the latter part. A hot wave was at its maximum at the close of the month, with temperatures over 100° at many points, and average temperatures some 15° above normal. Thunder showers in a large number of instances amounted to over 2 inches in 24 consecutive hours, but there were no reports of damage from lightning or wind squalls. Rainfall was at its greatest frequency during the second decade, and then being followed by critically high temperature, resulted favorably for the development of various forms of blight on certain vegetation, after having produced a fine appearance of growth. Early potatoes and tomatoes were the principal sufferers in this regard, but grains that were unfavorable in promise in the Spring, were somewhat restored toward normal.

The mean stage of the Delaware River at Phillipsburg was 2.9 feet, the highest readings being 4.5 feet on the 1st and 13th, and the lowest, 1.7 feet on the 31st. At Trenton the mean daily stage was 2.0 feet, which was 0.8 foot above normal; the highest reading was 3.0 feet from the 13th to the 15th, and the lowest, 1.1 feet on the 31st.

The temperature departure from normal for the year 1917, to date, by sections, is: The Highlands, -1.1°; Red Sandstone Plain, -0.8°; The Southern Interior, -0.7°; The Seacoast, -1.1°. The precipitation accumulated departure from normal for the year 1917, to date, is: The Highlands, -3.97; Red Sandstone Plain, -4.41; The Southern Interior, -0.80; The Seacoast, -1.03.

There were no displays of storm warnings during the month.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 35 stations, was 74.2°, which was 0.4° above normal. The highest temperature was 104° at Elizabeth on the 31st, and the lowest, 46° at Layton on the 1st. The highest

monthly mean temperature was 76.4° at Bridgeton and Jersey City, and the lowest, 69.6°, at Charlotteburg. The greatest daily range of temperature was 38° at Somerville on the 1st. Temperatures were slightly below normal along a narrow curved belt in the center of the State, and on the northeastern and southern shores, but elsewhere it was distinctly warmer than normal.

PRECIPITATION.

The average total monthly rainfall of the State, as deduced from observations of 41 stations, was 4.83 inches, which was 0.08 inch below normal. The greatest monthly amount of rain was 7.93 inches at Indian Mills, and the least, 2.38 inches at Layton. The greatest amount of rainfall in 24 consecutive hours was 2.94 inches on the 2d-3d, at Sandy Hook. There was a marked deficiency in rainfall in nearly all northern localities and along the middle shore. Rainy periods were: the 2d-3d, then practically dry until the 9th, when showers became almost daily in occurrence until the 19th and 20th; light scattered showers occurred on the 26th, 27th and 29th, and in the north, on the 22d. The average number of days on which 0.01 inch or more rain fell was 12, which was 2 more than normal.

WIND.

The prevailing wind direction was from the southwest, with an approximate velocity of 10 miles per hour, which was about normal. The highest velocity, sustained for 5 consecutive minutes, was 71 miles per hour from the south on the 2d, at Sandy Hook.

SUNSHINE AND CLOUDINESS.

The average number of clear days throughout the State was 10, which was 2 less than normal; partly cloudy, 11, or 1 less than normal; cloudy, 10, or 3 more than normal. The approximate percent. of possible sunshine was 55, and was probably slightly subnormal.

COMPARATIVE DATA FOR JULY.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more prec.
1885.....	75.2	100	44	3.50	7.28	1.29	.....	.....	.....	.....
1886.....	73.0	98	48	4.91	7.95	2.98	.....	.....	.....	.....
1887.....	77.1	102	54	7.67	15.29	1.95	.....	.....	.....	11
1888.....	71.1	95	45	3.50	7.03	1.25	.....	.....	.....	8
1889.....	73.4	95	48	10.19	18.58	4.66	.....	.....	.....	13
1890.....	72.5	101	39	5.62	7.55	3.60	12	11	8	9
1891.....	70.1	95	43	5.30	9.41	3.03	10	11	10	12
1892.....	74.3	105	44	4.03	7.96	2.38	12	14	5	8
1893.....	73.9	102	40	2.72	4.63	1.26	14	13	4	8
1894.....	75.7	106	44	1.66	5.00	0.15	14	12	5	6
1895.....	70.9	99	41	4.26	7.73	1.53	12	12	7	10
1896.....	75.0	98	47	5.50	13.29	2.45	13	10	8	13
1897.....	74.1	102	50	11.42	20.80	6.11	10	11	10	15
1898.....	75.3	107	38	4.96	11.72	2.23	11	13	7	10
1899.....	74.7	98	38	5.75	9.02	3.34	13	11	7	11
1900.....	75.9	104	42	4.74	7.21	1.11	15	12	4	11
1901.....	77.3	107	45	5.87	10.32	1.89	9	13	9	14
1902.....	73.0	100	43	4.78	9.92	1.83	10	12	9	13
1903.....	73.3	100	38	5.51	10.14	3.08	16	10	5	12
1904.....	72.3	98	42	4.87	8.06	2.41	13	10	8	13
1905.....	74.4	102	42	4.06	8.19	1.67	12	13	6	12
1906.....	72.8	94	46	5.58	13.25	3.44	11	14	6	12
1907.....	73.6	96	40	2.62	6.42	0.95	8	12	11	8
1908.....	75.6	106	42	4.70	8.12	1.97	12	13	6	9
1909.....	71.6	99	36	2.12	4.03	1.03	14	14	3	5
1910.....	75.3	99	42	1.36	5.33	0.22	12	12	7	5
1911.....	76.0	104	42	3.64	6.46	2.06	12	12	7	8
1912.....	73.7	100	36	3.86	9.91	1.01	14	10	7	9
1913.....	74.4	100	41	2.52	4.72	1.50	20	9	2	8
1914.....	71.5	97	40	6.05	8.57	1.94	9	11	11	15
1915.....	72.8	98	44	5.31	11.06	2.23	10	13	8	14
1916.....	74.4	97	45	5.40	9.01	3.15	11	9	11	12
1917.....	74.2	104	46	4.83	7.93	2.38	10	11	10	12

Climatological data for July, 1917.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.							Precipitation, in inches.				No. of days.				Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation, 0.1 in. or more.	Clear.	Pt. cloudy.	Cloudy.		Prevailing direction of wind.
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	26	73.8	+1.1	98	31	53	1	35	4.27	-1.33	1.48	0	9	21	2	8	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	25	69.6	+0.1	94	30†	48	1†	31	4.39	-0.49	.....	0	13	18	10	3	sw.	George S. Briggs.
Culvers Lake†.....	Sussex.....	848	16	.....	.....	.....	.....	49	1†	.....	3.38	-1.38	0.83	0	15	23	4	4	e.	Brice E. Riker.
Dover.....	Morris.....	600	33	72.4	+1.0	96	31	51	1	32	4.01	-1.47	.....	0	14	1	16	14	.....	William C. Harris.
Layton.....	Sussex.....	480	17	.....	.....	99	31	46	1	.....	2.38	-2.05	1.06	0	13	8	11	12	sw.	A. M. Depue.
Newton.....	Sussex.....	769	36	71.5	-0.4	94	31	56	6†	23	4.32	-0.38	1.03	0	10	9	8	14	sw.	Irving G. Kern.
Phillipsburg.....	Warren.....	363	35	75.0	+1.0	99	31	57	5†	28	5.62	+0.77	1.61	0	13	19	4	8	sw.	D. Wilson Smith.
Sussex.....	Sussex.....	442	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Means and extremes...				72.5	+0.6	99	31	46	1	35	4.05	-0.90	1.61	0	12	14	8	9	sw.	
<i>The Red Sandstone Plain.</i>																				
Bergen Point††*.....	Hudson.....	37	20	74.0	+0.6	99	31	56	1	25	6.69	+1.18	2.16	0	10	5	22	4	sw.	William H. Mitchell.
Boonton.....	Morris.....	400	27	73.0	.....	98	31	50	1	34	2.92	-2.54	1.25	0	13	23	3	5	sw.	J. W. Demmers.
Chatham.....	Morris.....	330	15	.....	.....	.....	.....	.....	.....	.....	4.08	.....	1.26	.....	14	.....	.....	.....	.....	Miss M. A. Butler.
Elizabeth.....	Union.....	45	38	75.2	-0.3	104	31	54	1	31	6.06	+0.80	2.74	0	15	4	19	8	w.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	29	75.0	+1.1	102	31	54	1	34	3.88	-1.08	1.11	0	11	18	5	8	w.	Hiram E. Deats.
Highwood.....	Bergen.....	90	28	72.6	+0.1	98	31	53	1	28	2.39	-2.98	0.93	0	14	8	14	9	se.	Charles J. Bates.
Jersey City.....	Hudson.....	10	18	76.4	+1.7	101	31	59	11	25	4.96	+0.18	1.31	0	13	5	17	9	sw.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	30	75.3	+0.8	98	31	57	1	30	4.26	-0.78	1.22	0	11	9	18	4	sw.	Samuel W. Cochran.
Little Falls.....	Passaic.....	180	14	75.4†	.....	98	31	51	8	30	3.03	-2.56	1.36	0	12	7	3	21	w.	Montclair Water Co.
Newark.....	Essex.....	159	75	74.2	-0.1	100	31	62	8	26	3.99	-0.74	1.60	0	12	15	8	8	s.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	110	64	74.0	-0.3	98	31	51	1	32	6.97	+1.92	1.86	0	12	19	5	7	w.	N. J. Experiment Station.
Palisades Park.....	Bergen.....	80	2	73.7	.....	100	31	53	1	31	2.40	.....	0.43	0	14	15	7	9	sw.	George P. Kirsten.
Paterson.....	Passaic.....	80	46	75.5	+1.2	101	31	56	1	30	2.71	-2.62	1.13	0	12	0	3	28	sw.	Marion T. Probert.
Plainfield.....	Union.....	100	31	74.0	+0.1	98	31	53	1	31	6.08	+0.68	1.75	0	16	9	14	8	sw.	John Neagle.
Pompton Plains.....	Morris.....	195	15	.....	.....	.....	.....	.....	.....	.....	4.63	-0.92	2.04	0	13	.....	.....	.....	.....	M. S. Taylor
Somerville.....	Somerset.....	60	35	73.2	-0.7	99	31	50	1	38	4.39	-0.82	1.50	0	12	9	13	9	sw.	A. A. Macdonald.
South Orange.....	Essex.....	200	47	74.6	+1.5	98	31	55	1	28	4.92	-0.20	2.03	0	10	7	11	13	w.	Dr. W. J. Chandler.
New York, N. Y.....		365	47	74.1	+0.6	98	31	58	11	22	5.96	+1.42	1.65	0	10	3	13	15	sw.	U. S. Weather Bureau.
Means and extremes...				74.4	+0.5	104	31	50	1	38	4.39	-0.70	2.74	0	12	10	11	10	sw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	36	76.4	-0.7	101	31	60	11	30	5.70	+1.27	2.05	0	11	15	8	8	sw.	Henry A. Jorden.
Burlington.....	Burlington.....	12	31	76.0	+0.7	100	31	57	12	30	4.92	-0.11	1.28	0	14	22	4	5	sw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	25	76.0	0.0	100	31	57	12	30	4.81	+0.54	1.94	0	16	18	9	4	sw.	George L. Wilson.
Hammononton.....	Atlantic.....	103	15	.....	.....	.....	.....	.....	.....	.....	5.40	+0.71	1.70	0	10	25	3	3	sw.	G. H. Parkhurst.
Hightstown.....	Mercer.....	120	25	.....	.....	99	31	55†	1	33	.....	.....	.....	.....	.....	.....	.....	.....	.....	G. Franklin Eldridge.
Imlaystown.....	Monmouth.....	185	29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. E. Bullock.
Indian Mills.....	Burlington.....	76	28	74.4	-0.7	101	31	54	12	34	7.93	+3.87	2.80	0	15	6	15	10	sw.	James M. Armstrong.
Lakewood.....	Ocean.....	54	14	74.1	+1.2	98	1	55	6†	33	6.91	+1.88	2.40	0	11	10	8	13	sw.	R. W. Holman.
Moorestown.....	Burlington.....	75	55	75.4	+0.6	98	31	58	12	25	5.64	+1.06	2.14	0	12	14	14	3	sw.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	10	.....	.....	.....	.....	.....	.....	.....	7.63	.....	2.42	0	11	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	19	.....	.....	.....	.....	.....	.....	.....	5.97	+1.83	2.46	0	11	22	1	8	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	46	75.1	+0.6	98	31	59	12	28	4.24	-0.53	1.39	0	14	5	11	15	sw.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	24	75.4	+1.3	103	31	57	12†	32	2.39	-1.51	0.97	0	9	17	10	4	sw.	Frank R. Austin.
Vineland.....	Cumberland.....	109	49	76.3	-0.1	100	31	59	12	26	4.76	+0.25	1.94	0	11	18	7	6	sw.	H. C. Himes.
Woodbine.....	Cape May.....	43	26	76.2	+2.3	98	31	60	7†	25	5.97	+1.95	2.04	0	14	16	11	4	se.	Baron de Hirsch Agr. Sch.
Philadelphia, Pa.....		117	47	76.4	+0.6	101	31	60	12	24	5.63	+1.30	2.69	0	11	5	9	17	sw.	U. S. Weather Bureau.
Means and extremes...				75.5	+0.5	103	31	54	12†	34	5.56	+0.93	2.80	0	12	16	8	7	sw.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	28	71.3	-1.6	100	31	57	12	21	3.47	-1.78	1.48	0	13	11	10	10	se.	Wilbur H. Pancoast.
Atlantic City.....	Atlantic.....	16	44	73.1	+0.6	99	31	60	2	21	4.35	+0.57	1.66	0	12	7	15	9	sw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	33	73.2	-0.2	98	31	61	3	24	5.81	+2.03	1.32	0	13	7	16	8	s.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	10	72.0	.....	99	31	57	12	20	6.98	.....	2.36	0	14	12	11	8	s.	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	19	73.3	-0.6	98	31	60	3	25	6.59	+1.81	2.94	0	13	5	15	11	sw.	U. S. Weather Bureau.
Means and extremes...				72.6	-0.4	100	31	57	12	25	5.44	+0.66	2.94	0	13	9	13	9	sw.	
For the State.....				74.2	+0.4	104	31	46	1	38	4.83	-0.08	2.94	0	12	12	10	9	sw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

* Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne.

Daily precipitation for July, 1917.

Stations.	Watershead.	Day of month.																															Total.	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>The Highlands and Kittatinny Valley.</i>																																		
Belvidere.....	Delaware.....			.69						.22	.78	.68	.12		*	1.48			.19				.06								.05		1.27	
Charlotteburg.....	Passaic.....			.80			*	.07		*	*	*	1.71		*	.70			.43				.08		*	.54	T.				T.			4.39
Culvers Lake.....	Delaware.....			.07					T.	.20	.58	.83	.05	.01	.01	.48	.03	.28	.22	T.		.01	T.	.45	.01					.15			3.38	
Dover.....	Passaic.....		.59	.04					.30		*	* 1.40	.04			.64	.14	*	.20			.34							.18		.14		4.01	
Layton.....	Delaware.....								T.	.16	.55	1.06	.06			.03	.10	.02	.20	.01	.02		.02	.01				T.		.14			2.38	
Newton.....	Delaware.....			.19						.08	.64	.71	.10	T.	T.	.77	.41		.28	T.							1.03			.11			4.32	
Phillipsburg.....	do.....			.50						.25	.91	.60	.07	.01	.06	1.61			T.	.13	T.			.60				.56	.20	.12			5.62	
Sussex.....	Hudson.....																																	
<i>The Red Sandstone Plain.</i>																																		
Bergen Point.....	Coast.....			1.05	.33				T.		.22	1.42	.02	2.16	.85	.50			T.	.10		.04	T.					T.		T.			6.69	
Boonton III.....	Passaic.....			.32	.03						.28	1.25	.02	T.	.02	.22	.20		.14	.12	.09		.04	T.			.20		T.			.03	2.92	
Chatham II.....	do.....			.42	.19				T.	.32	1.26	.31	.28	T.	.64	.05			.02	.21			.01					T.					4.08	
Elizabeth.....	Coast.....			.21	.43	.40				.06	.17	2.74	*	.25	.03	1.43	T.		.12	.02	.21		.01					T.	.14		.02		6.06	
Flemington.....	Raritan.....			T.	.59				T.	.11	.64	.59	.14	.16	1.11	.31		T.	.20	T.			.17	T.					.01		.02		3.88	
Highwood.....	Hackensack.....			.11	.33	.02			T.		.08	.93		.10	.14	.14	.01	.02	.06	.07			.36								.02		2.39	
Jersey City**.....	Coast.....			.16	.81	.50				.16	.11	1.15	.97		.70	.28	T.	.01	T.	.06			.04				T.			.01			4.96	
Lambertville.....	Delaware.....			.66	T.					.04	1.12	1.22		.06	.07	.81			T.	.05							.12	.05	.06				4.26	
Little Falls**.....	Passaic.....			.21	.27				T.	.08	.23	1.36			.16	.16	T.	.18	.04	.12			.20								.02		3.63	
Newark**.....	Coast.....			.11	.33	.29			T.	.16	.25	1.56	.15	.11	.58	.24		.04	T.	.17		T.					T.	T.			T.		3.99	
New Brunswick.....	Raritan.....			1.86	.49					.12	.30	1.45	.03	.07	.05	1.22			.29	T.	T.						.54	.55					6.97	
Palisades Park.....	Hackensack.....			.11	.43	.10			T.	.02	.06	.43	T.	.17	.22	.12		.31	.01	.30			.10					T.			.02		2.40	
Paterson.....	Passaic.....			.45					T.	.04	.08	1.13		.13	.02	.22	.02		.07	.19			.34					T.			.02		2.71	
Plainfield.....	Raritan.....			.30	.47	.10			.02	.03	.02	1.75	.69		1.00	.30	.06	.05	.03	.85											.04		6.08	
Pompton Plains I.....	Passaic.....			.39	.04						.20	1.04	.29	.02	T.	.19	.08		.14	.14	.03			2.04							.03		4.63	
Somerville.....	Raritan.....			.39						.24	.17	.95	.04	.08	.03	1.50		.05	.43	.06													4.31	
South Orange.....	Railway.....			.62	T.				T.	.45	.20	2.03	.10		.40	.36		.02	T.	.68			.06				T.	T.					4.92	
New York, N. Y***.....	Coast.....			.12	.99	.23			T.	.23	.12	.76	1.09		.57	.20		T.	T.	T.	T.	T.	1.65				T.	T.					5.96	
<i>The Southern Interior.</i>																																		
Bridgeton.....	Coast.....			1.86	.05				.15		.37	2.12		.27	.03	T.	T.		.28	.42	.10									.05			5.70	
Burlington.....	Delaware.....			*	1.10	.02				.08	.78	.93	.27	.05	*	.25			.11	T.	.85	.08	T.						.13	1.15		.05		4.92
Clayton.....	Maurice.....			1.94	.02				.04	.08	1.30	.30	.03	.04	.01	.26	T.	.03	.20	.08	.02	T.				T.	.01	T.	.45				4.81	
Hammonton.....	Mullica.....			1.70					.13	1.30	.18	1.01	.11		.02				.15	.25	.55						T.						5.40	
Hightstown.....	Raritan.....			1.50															.07	.13	.12								.71				\$	
Indiantown.....	Delaware.....																																	
Indian Mills.....	Mullica.....			.40	2.32	.09			.03	.15	.25	2.80		.38	.58	.38	T.		.11	.19	.20	.02					.03						7.93	
Lakewood.....	Metedeconk.....				2.40	.04			T.	T.	.17	1.42	.10	.75	.17	.33	T.		T.	.85	.08	T.				T.	.60						6.91	
Moorestown.....	Delaware.....			1.25						.33	.74	2.14	.02	.04	.24	.26			.27	.04								.28		.03			5.64	
Northfield.....	Coast.....			3.06					.14		.39	2.42		.53		.78		.05	.03	.14	.06	.03											7.63	
Pleasantville.....	Coast.....			1.89					.06		.40	2.46		.60	T.	.22		.04	.06	.14	.08	.02											5.97	
Trenton***.....	Delaware.....			.28	1.11				T.	.12	.67	.37	.52		.14	.11	T.	.02	.02	T.	.21					.60	.04			.03			4.24	
Tuckerton.....	Coast.....			.97					.05		.35	.72		.12	.02	.03			.10			.03											2.39	
Wineland.....	Maurice.....			1.93	.01				.20	T.	.09	1.30	T.	.12	T.			.17	.52	.23	.01							.18	T.	T.			4.76	
Woodbine.....	Coast.....			2.04					.33		.08	1.45		.38	.60	.16		.26	.15	.20	.06	.05	.06					.15					5.97	
Philadelphia, Pa.....	Coast.....			.61	.96						.38	2.57	.65	.06		.19	.09	T.	T.	.02	.09						T.	T.		.01			5.63	
<i>The Sea Coast.</i>																																		
Asbury Park.....	Coast.....			.15	1.48				.05	T.	.06	.58	.21	.25	.13	.21	.05	T.	.10	.16	.04	T.		T.			T.						3.47	
Atlantic City***.....	do.....			.13	1.31				.04		1.52	.15	.22	T.	.61	T.	.03	.02		.23	.07	.02			T.								4.35	
Cape May City.....	do.....			.50					.91		T.	.95	.30	.17	.20	1.32		T.	.29	.32	.16	.05	.10	T.				.54	T.				5.81	
Long Branch**.....	do.....			.40	1.96				.05		.09	1.90	.09	.39	1.36	.16	T.	T.	.09	.10	.36	T.						T.	.02	T.		.01		6.98
Sandy Hook***.....	do.....			.73	2.21					.01	.20	1.19	.39		.73	.14		.01	T.	.02	.14							.73	.09		T.		6.59	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded.
‡ ‡ Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.
* Precipitation included in the next following measurement. **Precipitation for 24-hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.			Moisture.		Sun- shine	
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	Percentage of possible sunshine.
							Miles per hour.	Direction.	Date.			
Atlantic City.....	29.99	30.23	20	29.61	11	7	25	sw.	12	86	88	58
Cape May City.....	30.26	30.26	20	29.69	11	6	30	nw.	14	86	85	58
Long Branch.....	29.97	30.23	20	29.60	11	14	60	nw.	2	80	85	58
Newark.....	29.97	30.21	25	29.65	11	13	50	sw.	2	80	76	50
New York, N. Y.....	29.96	30.21	25	29.66	12							
Palisades Park.....	29.99	30.22	25	29.66	12	9	29	se.	10	79	71	54
Philadelphia, Pa.....	29.97	30.23	25	29.64	11	12	71	s.	2	86	84	60
Sandy Hook.....	29.97	30.20	25	29.65	12	10	52	w.	2	84	74	48
Trenton.....	29.97	30.20	25	29.65	12	10	52	w.	2	84	74	48

§ Two directions and dates

Daily temperatures for July, 1917.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.		
The Highlands and Kittatinny Valley																																		
Belvidere.....	Maximum...	86	91	80	82	83	84	84	76	73	66	65	79	84	83	74	86	86	79	83	86	86	89	88	90	88	89	91	84	80	96	98	83.5	
	Minimum...	53	65	65	63	56	54	60	61	62	60	58	58	64	59	63	63	68	67	67	68	70	66	66	67	70	72	72	61	71	61	73	64.0	
Charlotteburg.....	Maximum...	79	86	68	73	79	74	73	69	66	60	61	71	78	79	75	76	80	76	76	79	82	84	85	87	86	88	83	84	83	94	94	78.3	
	Minimum...	48	66	53	57	48	53	52	53	60	57	59	57	63	53	63	59	62	64	67	66	64	66	62	61	65	69	71	57	53	71	77	60.8	
Dover.....	Maximum...	83	89	75	80	79	81	80	72	74	63	62	71	82	83	74	85	84	78	77	83	85	88	88	90	84	87	88	...	82	95	96	81.3 ^a	
	Minimum...	51	65	62	62	53	55	58	60	62	58	57	58	63	58	62	62	66	67	68	68	69	68	67	65	69	71	70	60	67	70	76	63.5	
Layton.....	Maximum...	...	76	...	...	...	...	70	...	65	61	...	82	...	75	...	...	...	...	...	85	84	...	87	93	85	84	...	...	85	96	99	...	
	Minimum...	46	66	66	56	50	55	55	57	58	59	58	58	61	56	60	59	64	63	66	61	64	63	63	66	67	71	70	57	57	63	73	60.9	
Newton.....	Maximum...	80	87	78	79	79	80	80	74	73	64	61	71	80	81	75	82	81	75	78	81	82	84	85	89	83	84	85	79	79	92	94	79.8	
	Minimum...	59	65	64	60	57	56	59	59	60	57	56	58	63	63	63	64	65	65	62	66	68	66	64	66	67	70	71	60	60	70	75	63.2	
Phillipsburg.....	Maximum...	88	92	84	83	84	85	85	80	74	67	67	76	84	86	83	88	87	80	84	86	87	90	91	92	90	89	89	85	83	96	99	85.0	
	Minimum...	62	67	66	64	57	57	62	62	62	60	58	58	65	61	61	64	68	66	69	67	70	66	68	67	70	73	72	62	61	71	76	64.9	
Sussex.....	Maximum...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Minimum...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
The Red Sandstone Plain.																																		
Bergen Point.....	Maximum...	81	91	75	81	81	81	81	74	77	67	65	75	83	84	76	87	87	86	80	86	83	88	87	88	83	86	90	82	83	97	99	82.7	
	Minimum...	56	66	64	64	60	59	60	64	65	59	60	59	63	62	65	63	68	69	70	67	69	68	70	69	69	72	69	65	62	72	76	65.3	
Boonton§§.....	Maximum...	84	90	79	84	84	84	83	78	76	66	67	75	83	83	77	87	86	80	79	84	86	89	83	86	87	90	82	86	96	98	83.4		
	Minimum...	50	68	61	62	52	55	57	54	62	59	57	57	60	57	63	65	66	67	68	68	63	65	66	69	70	72	65	67	69	74	62.6		
Elizabeth.....	Maximum...	85	94	83	83	85	85	83	76	75	67	65	76	87	87	80	91	91	84	83	88	89	91	92	92	87	91	93	87	86	100	104	85.8	
	Minimum...	54	65	65	65	56	60	61	59	63	60	59	57	62	61	65	65	68	68	70	68	70	68	70	68	70	68	71	71	73	59	58	72	76	64.7
Flemington.....	Maximum...	88	92	80	82	84	83	83	77	75	69	63	77	86	84	80	89	89	82	78	85	85	88	92	92	89	90	89	83	81	98	102	84.4	
	Minimum...	54	67	66	66	58	58	62	61	63	60	59	59	64	62	66	65	68	68	70	69	71	67	72	68	71	74	73	62	60	72	76	65.5	
Highwood.....	Maximum...	81	90	74	78	78	80	78	72	71	66	63	70	84	83	78	84	87	81	77	84	82	87	87	87	85	84	87	88	81	98	102	84.4	
	Minimum...	53	66	63	63	55	58	61	57	63	59	58	58	64	60	64	62	65	69	71	69	71	69	68	66	68	72	73	59	58	68	76	64.1	
Jersey City.....	Maximum...	83	93	74	82	84	85	84	78	78	65	66	75	86	90	83	89	91	85	80	86	86	90	88	89	86	89	96	86	99	101	84.9		
	Minimum...	62	69	68	63	65	64	67	65	64	61	59	60	64	66	67	68	71	72	70	71	72	70	72	71	72	73	75	66	67	74	79	68.0	
Lambertville.....	Maximum...	87	91	83	80	81	84	84	81	77	71	65	78	83	83	80	86	87	82	81	84	85	86	88	90	91	86	88	84	79	95	98	83.8	
	Minimum...	57	70	67	66	60	61	62	61	64	62	59	58	65	64	67	66	69	71	71	70	72	69	71	70	72	75	73	64	64	71	80	66.8	
Little Falls.....	Maximum...	83	91	87	85	86	85	83	...	...	68	71	76	84	85	79	88	88	84	82	88	88	93	91	90	87	92	96	88	86	91	98	86.0 ^b	
	Minimum...	58	67	64	63	56	60	60	51	60	60	58	59	65	59	64	69	71	...	...	...	71	...	71	67	68	69	71	73	60	70	81	64.8 ^b	
Newark.....	Maximum...	81	89	73	82	82	79	79	74	73	67	67	75	84	84	77	87	87	80	76	83	83	83	86	82	83	90	81	82	98	100	81.6		
	Minimum...	63	63	63	65	63	64	65	62	65	63	63	64	68	66	66	69	71	69	69	68	69	67	70	66	67	70	71	64	64	74	78	66.7	
New Brunswick.....	Maximum...	87	93	79	80	81	80	79	76	74	67	63	73	83	84	81	87	87	81	79	84	85	86	88	87	83	85	88	85	81	95	98	82.5	
	Minimum...	55	61	63	65	60	58	62	62	63	60	59	58	63	63	65	66	68	69	70	67	70	67	68	69	71	77	73	64	60	72	79	65.4	
Palisades Park.....	Maximum...	84	91	76	82	82	82	81	75	73	64	64	73	83	85	80	87	88	82	78	86	85	88	89	86	85	87	90	82	85	97	100	82.9	
	Minimum...	53	67	63	63	55	58	62	62	63	60	58	59	63	63	63	62	67	68	71	68	71	69	68	67	69	71	73	57	59	70	76	64.5	
Paterson.....	Maximum...	86	94	87	78	85	83	82	77	74	67	67	73	86	86	82	89	88	83	80	88	87	92	91	91	86	90	92	85	85	100	101	85.0	
	Minimum...	56	69	64	64	58	62	62	61	64	60	59	60	65	63	66	65	68	69	70	70	72	68	69	69	70	72	74	63	62	72	79	66.0	
Plainfield.....	Maximum...	84	91	74	80	81	83	81	75	74	66	66	74	83	84	76	86	87	83	79	85	85	88	88	89	87	87	90	83	83	96	98	82.8	
	Minimum...	53	64	64	65	60	58	62	62	63	60	59	58	60	65	66	65	68	69	70	68	70	68	71	70	72	71	73	63	59	72	72	65.2	
Somerville.....	Maximum...	88	92	79	83	84	83	82	78	75	68	66	76	84	85	86	88	89	82	79	86	85	89	89	91	86	84	89	86	87	96	99	84.3	
	Minimum...	50	60	63	63	54	55	59	59	61	59	57	56	62	56	63	61	65	61	67	66	68	64	66	66	67	71	71	58	56	66	73	62.0	
South Orange.....	Maximum...	83	91	75	80	81	81	81	74	74	68	78	73	82	85	78	86	85	82	79	84	85	88	88	88	89	87	89	82	84	96	98	83.0	
	Minimum...	55	67	65	65	59	59	62	62	64	61	58	60	64	64	66	66	69	69	70	69	71	69	71	71	72	73	73	63	61	74			

Scale of Shading.



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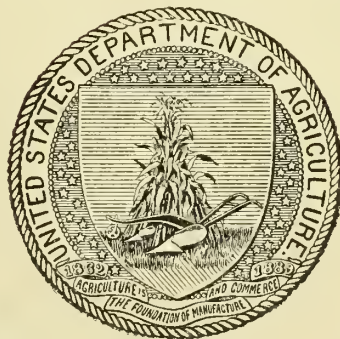
U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU
CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

AUGUST, 1917.

BY
G. HAROLD NOYES
METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
SEPTEMBER 21, 1917.

Departure of the Mean Temperature from the Normal, August, 1917.



Shaded portions show excess (+).
 Unshaded portions show deficiency (-).
 Lines show amount of excess or deficiency.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

VOL. XXX. TRENTON, N. J., AUGUST, 1917. No. 8.

GENERAL SUMMARY.

At the close of July, 1917, a hot wave over eastern districts of the country was just commencing, and it continued for two days in August in New Jersey, temperatures reaching 100° at many stations. The heat was above normal nearly every day except about 5, and it was one of the five warmest Augusts since 1885. The great number of clear days and moderate deficiency of rain further contributed toward the impression of unusual heat. The heat, drought and sunshine, taken together were rather a potent factor in tending to diminish crop production, which earlier in the season gave very favorable indications. Except for last August which was the driest ever known in this State, this August was the driest since 1896. During the first two days of the month, in the large centers of population, there were numerous heat prostrations and many reached a fatal termination.

The mean stage of the Delaware River at Phillipsburg was 2.0 feet; the highest was 2.5 feet on the 10th, and the lowest, 1.2 feet on the 6th. At Trenton, the mean daily stage was 1.3 feet, which was 0.3 foot above normal; the highest stage was 2.5 feet on the 10th, and the lowest, 0.6 foot on the 7th, 8th and 9th.

The temperature departure from the normal for the year 1917, to date, by sections, is: The Highlands, -0.7°; Red Sandstone Plain, -0.5°; The Southern Interior, -0.4°; The Seacoast, -0.8°. The precipitation accumulated departure from normal for the year 1917, to date is: The Highlands, -5.87; Red Sandstone Plain, -7.77; The Southern Interior, -3.48; The Seacoast, -2.19.

There were no displays of storm warnings during the month.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 35 stations, was 74.0°, which was 1.9° above normal. The highest temperature was 103° at Elizabeth on the 1st, and the lowest, 41° at Culvers Lake on the 26th. The highest monthly mean temperature was 76.9° at Jersey City, and the lowest mean, 68.2° at Charlotteburg. The greatest daily range of temperature was 39° at Clayton on the 19th. All stations were above normal except Asbury Park.

PRECIPITATION.

The average total monthly rainfall, as deduced from observations of 41 stations, was 2.21 inches, which was 2.75 inches below normal. The greatest monthly amount of rain was 5.68 inches at Long Branch, and the least, 0.86 inch at Paterson. The greatest amount of rain in 24 consecutive hours was 3.57 inches at Long Branch on the 24th. All stations were deficient in monthly total as compared with the normal, except Long Branch. The average number of days on which 0.01 inch or more rain fell was 8, which was 2 less than normal.

WIND.

The prevailing wind direction for the month was from the southwest, with an approximate velocity of 9 miles per hour, which was about normal. The highest velocity, sustained for 5 consecutive minutes, was 73 miles per hour from the south on the 1st, at Sandy Hook.

SUNSHINE AND CLOUDINESS.

The average number of clear days throughout the State was 18, which was 5 more than normal; partly cloudy, 9; which was 2 below normal; cloudy, 4, which was 3 below normal. The approximate per cent. of possible sunshine was 72, and was considerable above normal.

MISCELLANEOUS.

Thunderstorms occurred in some portion of the State on the 1st, 2d, 6th, 9th, 10th, 15th, 16th, 17th, 21st to 25th, 29th and 30th. Dense fog was observed at scattered points on the 1st, 2d, 5th, 12th, 14th, 17th and 21st to 24th. Hail occurred at a few places on the 1st, 2d and 21st. Lunar halo was observed at Trenton on the 31st. The aurora was observed at Layton on the 25th.

COMPARATIVE DATA FOR AUGUST.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more prec.
1885.....	71.7	95	40	6.11	10.09	3.47	.....	.....	.....	.....
1886.....	69.5	96	42	2.81	5.36	1.10	.....	.....	.....	.....
1887.....	70.4	94	42	3.76	7.34	2.09	.....	.....	.....	.....
1888.....	72.5	98	41	6.13	10.53	2.55	.....	.....	.....	.....
1889.....	69.6	91	45	5.13	9.06	1.93	.....	.....	.....	.....
1890.....	71.5	99	40	4.90	7.51	2.89	.....	.....	.....	.....
1891.....	72.8	100	46	5.32	8.89	2.58	.....	.....	.....	.....
1892.....	73.4	99	46	3.63	5.65	0.72	12	13	6	13
1893.....	72.8	98	38	6.52	11.94	3.55	14	11	6	9
1894.....	70.9	97	44	2.58	9.28	0.15	13	12	6	10
1895.....	74.2	102	34	2.53	5.06	0.02	16	12	3	11
1896.....	73.6	105	39	1.83	3.27	0.50	17	10	4	13
1897.....	71.0	97	41	4.39	8.69	2.07	14	12	5	9
1898.....	74.8	98	42	5.36	9.28	2.70	12	12	7	10
1899.....	72.3	99	39	4.36	9.70	2.16	10	12	9	9
1900.....	76.3	104	41	2.68	4.56	0.70	15	11	5	10
1901.....	73.8	98	44	9.43	15.80	4.88	12	10	9	11
1902.....	70.1	93	40	3.91	10.67	1.31	15	13	3	9
1903.....	68.4	98	39	6.95	14.54	4.30	10	10	11	13
1904.....	70.8	92	37	6.62	13.01	2.65	15	10	6	9
1905.....	71.1	95	38	5.72	9.88	3.51	13	10	8	12
1906.....	74.6	97	42	5.95	17.91	2.21	10	11	10	13
1907.....	70.5	96	39	3.45	7.61	1.79	14	12	5	10
1908.....	70.6	103	36	5.05	9.23	2.43	11	10	10	10
1909.....	70.2	100	34	4.59	12.94	1.41	14	9	8	6
1910.....	70.4	92	36	3.78	8.46	1.76	9	10	12	10
1911.....	72.1	101	39	8.91	14.74	5.31	10	11	10	11
1912.....	70.0	95	35	3.42	7.62	1.19	12	13	6	10
1913.....	71.7	100	38	4.06	10.21	1.93	18	9	4	10
1914.....	73.3	98	42	3.15	6.53	1.04	13	12	6	9
1915.....	70.9	98	41	7.73	10.92	4.02	11	11	9	13
1916.....	73.2	100	40	1.34	4.15	0.27	20	7	4	6
1917.....	74.0	103	41	2.21	5.68	0.86	18	9	4	8

ERRATA.

March, 1916.—Bergen Point, precipitation on the 10th .01, should read .10; total for the month 3.04, should read 3.13; departure from normal -1.18, should read -1.09; Highwood, number of days with .01, or more, precipitation 9, should read 11; Clayton, number of days with .01, or more, precipitation 9, should read 12; New York, total snowfall 25.5, should read 23.8.

April, 1916.—Palisades Park, number of clear days 12, partly cloudy days 5, should read 5 and 12 respectively; Flemington, mean maximum temperature 58.8°, should read 59.8°; New Brunswick, maximum temperature on the 22d 56°, should read 51°; mean maximum temperature 57.5°, should read 57.1°.

May, 1916.—Vineland, total precipitation on page 37 2.76, should read 2.79; Layton, mean maximum temperature 70.0°, should read 71.7°; mean minimum temperature 50.0°, should read 47.5°; Bergen Point, mean maximum temperature 71.7°, should read 70.0°; mean minimum temperature 47.5°, should read 50.0°.

June, 1916.—Elizabeth, lowest temperature 49°, should read 47°; Bergen Point, mean minimum temperature 56.6°, should read 55.6°.

Climatological data for August, 1917.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.							Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation of in. or more.	Clear.	Pt. cloudy.	Cloudy.		
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	26	73.2	+2.4	96	2	49	26	36	2.77	-2.19	0.65	0	8	26	2	3	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	25	68.2	+0.5	89	7†	44	26	37	3.09	-1.66	1.01	0	9	27	4	0	sw.	George S. Briggs.
Culvers Lake†.....	Sussex.....	848	16	.....	.....	.....	.....	41	26	.....	1.83	-2.70	0.65	0	6	24	5	2	e.	Brice E. Riker.
Dover.....	Morris.....	600	33	71.9	+2.7	96	1†	48	26	32	2.60	-2.40	0.72	0	12	8	15	8	.....	William C. Harris.
Layton.....	Sussex.....	480	17	70.7‡	+2.3	94‡	2	44	26	34	1.74	-1.90	0.67	0	8	20	3	8	sw.	A. M. Depue.
Newton.....	Sussex.....	769	36	71.6‡	+1.8	91	2	.....	.....	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	Irving G. Kern.
Phillipsburg.....	Warren.....	363	35	73.9	+2.2	97	2	49	26	34	4.16	-0.54	1.19	0	9	22	6	3	s.	D. Wilson Smith.
Sussex.....	Sussex.....	442	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. W. Tittsworth.
Means and extremes...	.....	.....	.....	71.6	+2.0	97	2	41	26	37	2.70	-1.90	1.19	0	9	21	6	4	sw.	.....
<i>The Red Sandstone Plain.</i>																				
Bergen Point††*.....	Hudson.....	37	20	74.6‡	+2.9	96	1	52	26	30	1.84	-3.22	1.01	0	5	.....	.....	.....	.....	William H. Mitchell.
Boonton.....	Morris.....	400	52†	72.5	.....	98	1†	42	26	36	1.25	-4.14	0.30	0	8	29	2	0	sw.	J. W. Demmers.
Chatham.....	Morris.....	330	15	.....	.....	.....	.....	.....	.....	.....	0.99	-3.93	0.16	0	7	18	7	6	.....	Paul Molitor.
Elizabeth.....	Union.....	45	38	75.5	+2.0	103	1	49	26	37	1.74	-2.80	0.62	0	7	13	14	4	sw.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	29	74.8	+3.0	97	2	50	26	35	1.86	-2.55	0.83	0	7	23	4	4	sw.	Hiram E. Deats.
Highwood.....	Bergen.....	90	28	72.8	+1.6	96	1	49	26	33	2.28	-2.79	0.83	0	11	8	17	6	se.	Charles J. Bates.
Jersey City.....	Hudson.....	10	18	76.9	+3.6	97	1†	56	26	27	1.79	-2.86	0.97	0	9	11	16	4	s.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	30	75.2	+2.8	96	2	53	26	28	1.20	-3.56	0.73	0	6	15	16	0	sw.	Samuel W. Cochran.
Little Falls.....	Passaic.....	180	514	75.8‡	.....	99	1	.....	.....	31	0.91	-4.20	0.32	0	9	12	5	14	w.	Montclair Water Co.
Newark.....	Essex.....	159	75	75.3	+2.7	99	1	54	26	25	1.27	-3.97	0.81	0	8	19	4	8	nw.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	110	64	74.2‡	+1.8	97	1	49	26	31	0.87	-4.22	0.25	0	9	17	11	3	s.	N. J. Experiment Station.
Palisades Park.....	Bergen.....	80	2	73.3	.....	99	1	48	26	33	2.28	.....	0.70	0	9	15	13	3	sw.	George P. Kirsten.
Paterson.....	Passaic.....	80	46	76.1	+4.1	100	1†	53	26	31	0.86	-4.27	0.30	0	11	5	6	20	.....	Marion T. Probert.
Plainfield.....	Union.....	100	31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	John Neagle.
Pompton Plains.....	Morris.....	195	15	.....	.....	.....	.....	.....	.....	.....	3.23	-1.85	1.74	0	7	.....	.....	.....	.....	M. S. Taylor
Somerville.....	Somerset.....	60	35	72.8	+0.9	97	1†	46	26	38	2.43	-2.28	1.04	0	6	18	7	6	nw.	A. A. Macdonald.
South Orange.....	Essex.....	200	47	73.8	+3.1	97	1	50	26†	34	1.65	-3.74	0.98	0	6	12	17	2	w.	Dr. W. J. Chandler.
New York, N. Y.....	Essex.....	365	47	74.6	+2.4	98	1	56	26	24	1.79	-2.74	1.05	0	9	0	13	9	s.	U. S. Weather Bureau.
Means and extremes...	.....	.....	.....	74.5	+2.0	103	1	42	26	38	1.65	-3.36	1.74	0	8	15	10	6	sw.	.....
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	36	75.8	+0.7	100	2	52	26	32	2.64	-2.10	1.20	0	7	21	4	6	se.	Henry A. Jorden.
Burlington.....	Burlington.....	12	531	75.6	+2.2	96	2	52	26	30	3.29	-2.32	0.87	0	12	29	1	1	nw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	25	75.0	+1.5	97	2	49	26	39	2.20	-2.95	1.42	0	9	22	7	2	sw.	W. Rex B. Sutch.
Hammononton.....	Atlantic.....	103	15	.....	.....	.....	.....	.....	.....	.....	3.46	-1.22	2.01	0	5	29	1	1	sw.	G. H. Parkhurst.
Hightstown.....	Mercer.....	120	25	75.4‡	+3.5	97	1	49	26	32	2.36	-2.41	0.63	0	9	13	16	2	.....	G. Franklin Eldridge.
Imlaystown.....	Monmouth.....	185	29	.....	.....	.....	.....	.....	.....	34	.....	.....	.....	0	.....	.....	.....	.....	.....	F. B. Jones.
Indian Mills.....	Burlington.....	76	28	73.4	+0.3	99	2	45	26	38	2.25	-2.92	0.80	0	8	14	15	2	sw.	James M. Armstrong.
Lakewood.....	Ocean.....	54	14	72.4	+1.7	97	1†	47	26	31	1.28	-3.79	0.33	0	8	17	5	6	sw.	R. W. Holman.
Moorestown.....	Burlington.....	75	55	75.0	+2.5	95	2	52	26	26	3.90	-0.84	1.33	0	6	18	13	0	se.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	10	.....	.....	.....	.....	.....	.....	.....	1.48	.....	1.15	0	7	.....	.....	.....	.....	William L. Fliek.
Pleasantville.....	Atlantic.....	26	19	.....	.....	.....	.....	.....	.....	.....	1.74	-2.95	0.74	0	5	24	3	4	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	46	74.8	+1.8	95	1	53	26	25	2.11	-3.26	1.30	0	8	14	8	9	s.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	24	74.6	+2.4	101	1	45	26	37	0.87	-4.91	0.73	0	6	18	11	2	sw.	Frank R. Austin.
Vineland.....	Cumberland.....	109	49	75.2‡	+1.6	97	2	51	26	32	2.64	-2.33	0.83	0	8	24	5	2	sw.	H. C. Himes.
Woodbine.....	Cape May.....	43	26	74.1	+1.9	96	1†	53	19	33	1.40	-2.90	0.48	0	8	14	16	1	nw.	Baron de Hirsch Agr. Sch.
Philadelphia, Pa.....	.....	117	47	76.7	+2.9	96	2	58	26	22	3.82	-0.79	2.27	0	8	13	10	8	sw.	U. S. Weather Bureau.
Means and extremes...	.....	.....	.....	74.7	+1.8	101	1	45	26	39	2.26	-2.68	2.01	0	8	20	8	3	sw.	.....
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	28	71.8	-0.1	93	1	55	26	23	4.06	-1.08	1.31	0	8	.....	.....	.....	.....	Wilbur H. Pancoast.
Atlantic City.....	Atlantic.....	16	44	74.5	+1.9	92	1	55	26	21	2.44	-1.86	1.84	0	6	13	13	5	s.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	33	74.2	+0.8	91	1	56	26	20	1.41	-2.85	0.52	0	7	19	9	3	s.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	10	.....	.....	94	1	52	26	.....	5.68	.....	3.57	0	8	16	13	2	s.	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	19	74.4	+1.7	94	2	59	26	21	2.77	-2.08	1.60	0	9	12	12	7	s.	U. S. Weather Bureau.
Means and extremes...	.....	.....	.....	73.7	+1.1	94	1†	52	26	23	3.27	-1.97	3.57	0	8	15	12	4	s.	.....
For the State.....	.....	.....	.....	74.0	+1.9	103	1	41	26	39	2.21	-2.75	3.57	0	8	18	9	4	sw.	.....

† On other dates also.

‡ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

* Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

†, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne.

Daily precipitation for August, 1917.

Stations.	Watershead.	Day of month.																															Total.		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
<i>The Highlands and Kittatinny Valley.</i>																																			
Belvidere.....	Delaware.....	.05		.61				.19		.21							.11						.36		.80	.31					.40	.61		2.77	
Charlotteburg.....	Passaic.....		.23	.10				.12		.18				T.	.08								T.		.47						.40	.61		3.09	
Culvers Lake.....	Delaware.....		.39	.10				.20		.65													T.		.47						.40	.61		3.09	
Overton.....	Passaic.....	.01	.45					.12		.16							.06	.11					.67		.05	.67					.03	.26		2.60	
Wayton.....	Delaware.....		.28	.09				.27		.67							.05	.02							.33							.03		1.74	
<i>The Red Sandstone Plain.</i>																																			
Newtown.....	Delaware.....		.01	.13				.40		.27							.06								1.30									\$	
Phillipsburg.....	do.....	.04	T.	.46				.50		.27							.83							1.19		.71						.02	.14	4.16	
Sussex.....	Hudson.....																																		
<i>The Southern Interior.</i>																																			
Bergen Point.....	Coast.....			.15					T.								T.	.19						T.	.02	1.01					T.	.47		1.84	
Boonton III.....	Passaic.....		T.	.30					.07	T.	T.				T.		T.	.05						.22		.30	.06					.20	.05	1.25	
Hamham III.....	do.....			.16	.15						T.						T.	.15						.14	T.	.15	.08						.16	0.99	
Elizabeth.....	Coast.....	.01		.25						T.															*	*	.66						.08	.62	1.74
Lemington.....	Raritan.....		T.	.07				.11		.03							.12	.13						T.			.28	T.					.51	1.86	
Highwood.....	Hackensack.....	.22	.08	.06						.09							.05						.32		.12	.83	.07					T.	.42	.02	2.28
Jersey City**.....	Coast.....	.23	.01	.20				.01		T.							.03							.02		.35	.27	.64				.01	.27		1.79
Lambertville.....	Delaware.....			.07						T.								.73						T.		.06	.97					.05	.22		1.20
Little Falls**.....	Passaic.....	.08	.12	.02				T.			.01						.05						.16		.12	.32					T.	.03		0.91	
Newark**.....	Coast.....	.07	.02	.02				T.		T.							.07							T.		.04	.81					.18	.06	1.27	
New Brunswick.....	Raritan.....	T.		.11						T.							.12	.10						.04	.03	.18	.07					.04	.18	0.87	
Palisades Park.....	Hackensack.....	.70	.08	.10				T.			T.						.04						.02		.35	.27	.64					T.	.08		2.28
Paterson.....	Passaic.....	.02	.12					T.		.03				.30			.02							.03	.03	.03	.22	.04				.02	.02	0.86	
Plainfield**.....	Raritan.....																																		
Compton Plains I.....	Passaic.....			.74						.02	.02						T.							1.74		.44	.08						.19	T.	3.23
Omerville.....	Raritan.....			.11						T.							.68	.36						.76	T.	.41						.11		2.43	
South Orange.....	Rahway.....	.31	T.	.04				T.			.12						.12							T.		.18	.80					T.	.20		1.65
New York, N. Y***.....	Coast.....	.02	.02	.15				T.		T.							.03							T.	.01	.08	1.04					.02	.42		1.79
<i>The Sea Coast.</i>																																			
Bridgeton.....	Coast.....		.05							.12	T.						T.	.35								.27	1.20					.05	.60	T.	2.64
Burlington.....	Delaware.....		.63	.19						.02							.64	.23						.14	.01	*	.80	.60				*	.03		3.29
Wayton.....	Maurice.....	T.		.14	T.					.04								.06						.11	T.	.28	1.42	.01				.10	.04	T.	2.20
Ammononton.....	Mullica.....		*	2.01						T.							T.	T.								.22	.87						.36		3.46
Lightstown.....	Raritan.....		.25	.07													.45	.21						.02		.02	.35	.63					.36		2.36
Maytown.....	Delaware.....									.02							.03							.90		T.	.63	.34							\$
Indian Mills.....	Mullica.....		.80	.28						.06							.25	.25	.50						.06	.50					.05	T.		2.25	
Wakewood.....	Metedeconk.....	.14	.10	.25						T.							.05	.28						T.		T.	.15	.16				.15		1.28	
Coorestown.....	Delaware.....			.13						T.	.15						*	1.22	.33	1.07					T.	1.33	1.07					T.	.30		3.90
Northfield.....	Coast.....			.08						T.							.15								.07	.02	.06					.08	.02	1.48	
Leasantville.....	Coast.....	T.		.32														.74								.65	.02	1					.01	1.74	
Monton***.....	Delaware.....		.05	.01						T.							T.	.94	.36					.23		.03	.44					T.	.05		2.11
Blackerton.....	Coast.....		.52	.21						T.							T.	.01							.07	.03	.03					T.	.05		0.87
Cleland.....	Maurice.....	.66		.71	T.					.03							.03								.20	*	.83						.18		2.64
Goodbine.....	Coast.....			.18						.04							.16									.10	.48	.04					.32	.08	1.40
Philadelphia, Pa.....	Delaware.....		.23	.03						.05							2.25	.02						T.		.36	.87					.01	T.		3.82
<i>The Sea Coast.</i>																																			
Esbury Park.....	Coast.....	T.	.50	.04						1.23	.08						T.		.40					T.	T.	.03	1.16					T.	.62		4.06
Atlantic City***.....	do.....			.05														1.84								.40	.08	.02				T.	.05		2.44
Pe May City.....	do.....			.03						.01							.07									.30	.42	.52				T.	.06		1.41
Long Branch**.....	do.....	.30	.40	.04						.07	.04						T.	.96									3.57					T.	.30		5.68
Andy Hook***.....	do.....	.26	.44	.11						T.	T.						.05	.12								.05	1.56					.04	.14		2.77

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded.
|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.
* Precipitation included in the next following measurement. **Precipitation for 24-hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.				Moisture.		Sun- shine
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	Percentage of possible sunshine.
							Miles per hour.	Direction.	Date.			
Atlantic City.....	30.03	30.32	31	29.65	24	7	18	sw.	24	77	79	75
Pe May City.....	30.05	30.31	31	29.71	23	6	26	nw.	2			
ng Branch.....	30.02	30.33	31	29.64	24	12	57	nw.	1	76	73	74
ark.....		30.25	31	29.66	24	4	24	w.	29	76*	61†	68
w York, N. Y.....	30.01	30.32	31	29.63	24	13	52	s.	24	78	70	76
lisades Park.....	30.00	30.28	31	29.56	24							
iladelphia, Pa.....	30.03	30.31	31	29.61	24	9	31	sw.	29	72	67	71
ndy Hook.....	30.01	30.32	31	29.61		12	73	s.	1	82	79	76
enton.....	30.01	30.31	31	29.55	24	9	44	nw.	16	80	64	67

Daily temperatures for August, 1917.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.		
<i>The Highlands and Kittatinny Valley</i>																																		
Belvidere.....	Maximum...	90	96	86	86	84	87	88	85	84	80	84	85	88	85	84	84	86	82	86	88	89	83	81	86	87	77	84	84	88	79	76	84.9	
	Minimum...	75	74	65	57	57	62	64	71	68	65	56	54	59	61	65	67	63	55	50	54	62	65	62	67	62	49	52	56	64	65	61	61.5	
Charlotteburg.....	Maximum...	88	85	84	79	85	80	89	76	79	76	84	81	79	74	81	75	81	76	86	88	89	77	82	86	74	74	84	85	82	80	77	78.4	
	Minimum...	69	67	66	55	48	51	62	66	67	63	47	48	51	53	61	58	60	56	57	51	59	58	65	66	60	44	53	59	52	64	59	57.9	
Dover.....	Maximum...	96	96	83	81	83	84	87	80	82	79	82	83	87	83	80	82	84	80	86	87	87	79	81	85	83	75	83	84	84	75	75	83.1	
	Minimum...	75	72	66	57	...	58	65	68	68	58	52	54	57	58	63	65	63	56	54	55	63	62	65	70	58	48	51	56	61	65	59	60.7	
Layton.....	Maximum...	...	94	...	...	83	86	91	82	...	79	82	84	86	79	82	82	84	80	84	82	84	80	80	82	80	75	83	82	83	85	74	...	81.8
	Minimum...	73	71	65	53	51	55	62	67	66	64	52	55	52	58	65	61	60	52	50	54	60	59	67	68	56	44	49	55	61	66	60	59.1	
Newton.....	Maximum...	90	91	82	78	80	...	85	81	80	75	79	85	83	79	79	80	83	78	82	86	88	80	79	83	79	83	82	83	85	74	...	81.8	
	Minimum...	71	72	65	57	56	...	63	63	67	62	54	59	56	...	63	59	61	55	54	...	64	62	62	62	61	...	...	...	...	...	...	61.3	
Phillipsburg.....	Maximum...	95	97	87	83	86	89	90	88	86	80	84	86	89	86	85	87	81	87	84	90	91	87	82	88	84	77	88	86	89	81	76	86.1	
	Minimum...	72	71	67	58	58	63	64	70	67	64	55	58	60	58	66	63	56	55	58	58	63	64	66	67	61	49	54	57	65	66	61	61.7	
Sussex.....	Maximum...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Minimum...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
<i>The Red Sandstone Plain.</i>																																		
Bergen Point.....	Maximum...	96	91	84	87	83	...	84	81	81	82	83	85	82	83	83	87	83	86	89	80	82	79	88	86	76	86	85	87	85	76	84.4		
	Minimum...	78	75	68	68	63	...	71	70	66	61	62	60	62	66	68	66	68	59	56	62	60	64	68	65	52	57	60	66	67	64	61.8		
Boonton§§.....	Maximum...	98	98	87	84	86	85	92	83	83	82	85	88	89	84	82	85	88	82	85	87	89	82	84	86	84	78	84	85	89	82	81	85.7	
	Minimum...	73	69	65	56	53	54	62	65	70	63	50	52	55	56	62	62	63	57	51	54	62	60	65	70	64	42	49	53	61	65	55	59.3	
Elizabeth.....	Maximum...	103	101	87	89	87	89	91	87	89	86	87	88	90	81	86	84	92	88	91	93	95	85	81	92	88	80	81	89	93	87	79	88.4	
	Minimum...	76	74	68	58	57	58	65	68	72	65	53	60	58	64	66	65	55	54	59	64	61	67	68	64	49	53	57	68	69	63	62.6		
Flemington.....	Maximum...	96	97	90	84	89	87	92	87	87	82	85	91	90	86	86	89	89	81	89	89	90	82	79	88	85	80	88	87	90	80	76	86.7	
	Minimum...	78	73	69	59	59	60	65	69	70	65	55	58	58	59	65	67	65	58	55	59	63	64	67	70	65	50	53	56	66	69	63	63.0	
Highwood.....	Maximum...	96	94	82	79	81	83	86	82	83	81	79	83	84	82	83	82	84	83	85	88	86	77	77	82	84	77	84	83	85	81	74	82.9	
	Minimum...	76	71	70	59	56	58	64	69	73	65	53	61	58	60	63	65	66	54	52	67	67	63	65	70	66	49	53	59	67	68	62	62.7	
Jersey City.....	Maximum...	97	97	84	85	85	86	90	85	86	85	85	87	86	85	85	86	87	88	86	90	89	83	79	87	87	80	85	88	83	78	86.1		
	Minimum...	77	76	69	65	63	67	70	73	74	68	63	65	68	67	70	71	70	61	62	62	69	69	69	71	69	56	61	64	69	70	65	67.7	
Lambertville.....	Maximum...	95	96	85	82	86	86	89	85	86	80	81	85	86	86	84	81	85	84	80	86	87	88	85	81	87	84	77	84	87	82	77	84.8	
	Minimum...	83	78	71	63	60	64	67	69	75	67	60	62	62	61	66	69	67	59	58	64	66	67	69	71	64	53	57	62	68	69	64	65.6	
Little Falls.....	Maximum...	99	97	95	84	86	88	92	85	87	81	85	87	86	84	86	88	81	86	88	90	83	84	88	84	76	86	85	88	85	79	86.4		
	Minimum...	76	71	70	65	62	70	71	76	72	63	61	56	59	60	64	65	65	58	55	59	65	64	67	70	65	...	...	...	...	...	66.8		
Newark.....	Maximum...	99	98	87	85	82	87	91	81	84	81	83	83	85	80	81	79	89	83	85	89	88	78	73	84	85	77	86	85	84	81	74	84.3	
	Minimum...	79	74	71	65	65	67	69	73	73	68	62	64	67	66	68	69	68	61	64	65	66	65	65	69	62	54	61	61	66	65	62	66.3	
New Brunswick.....	Maximum...	97	95	85	84	...	85	86	83	83	80	82	84	88	82	82	84	87	83	86	88	90	79	77	89	85	77	87	85	89	84	79	84.8	
	Minimum...	79	74	69	62	61	58	65	...	71	65	56	59	60	66	64	67	64	60	57	61	65	66	67	72	66	49	56	58	65	68	63	63.6	
Palisades Park.....	Maximum...	99	96	84	82	84	82	88	82	84	82	85	85	86	82	84	83	87	83	86	88	88	79	78	85	85	78	86	84	87	83	76	84.5	
	Minimum...	72	71	67	58	56	60	64	70	73	59	54	62	60	60	64	65	66	55	53	60	65	63	65	69	58	48	54	60	66	66	62	62.1	
Paterson.....	Maximum...	100	100	86	85	83	87	90	85	86	84	85	88	88	85	85	85	91	86	90	91	92	81	80	85	88	80	91	90	90	82	80	87.1	
	Minimum...	80	74	70	63	59	62	67	72	73	66	58	62	64	63	65	66	67	61	59	62	66	65	66	71	66	53	57	63	66	69	64	65.1	
Plainfield.....	Maximum...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Minimum...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Somerville.....	Maximum...	97	97	85	83	87	86	90	85	85	80	82	85	89	82	85	87	88	82	87	87	90	82	80	88	85	78	87	85	88	82	77	85.9	
	Minimum...	75	70	63	56	54	55	62	66	70	62	50	53	56	56	65	63	62	54	52	54	59	62	66	67	61	46	49	51	62	65	61	59.6	
South Orange.....	Maximum...	97	94	84	83	81	86	87	82	84	80	81	84	83	81	81	81	85	79	84	87	88	80	77	83	82	74	84	83	86	82	74	83.1	
	Minimum...	76	75	69	63	63	63	67	68	73	67	59	62	64	61	66	66	67	59	56	61	66	65	61	66	65	50	50	65	66	67	63	64.5	
New York, N. Y.....	Maximum...	98	96	83	80	82	82	88	78	83	80	82	83	83	78	81	80	85	80	81														



Scale of Shades.



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CLIMATOLOGICAL DATA

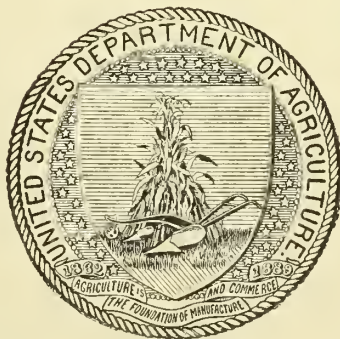
NEW JERSEY SECTION

SEPTEMBER, 1917.

BY

G. HAROLD NOYES

METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
OCTOBER 18, 1917.

Departure of the Mean Temperature from the Normal, September, 1917.



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

VOL. XXX. TRENTON, N. J., SEPTEMBER, 1917. No. 9.

GENERAL SUMMARY.

September weather was very pleasant in New Jersey in 1917, due to the absence of extreme hot days which sometimes occur, and to the infrequency of rain. Except for the cold days of the 11th and 12th, the low temperature was not especially noticeable, but actually it was the coldest September since State records were first compiled in 1885. The cold weather of the 11th and 12th was attributable to an area of high pressure that overspread this portion of the country in its eastward drift from northwestern Canada; temperatures were down to or below freezing at many places in the northern half of the State, and in the cranberry marshes, a thermometer at the bog surface recorded 23°. As a consequence there was a very heavy damage to cranberries, and some injury to other susceptible vegetation. The frost was denominated "killing" on the 11th in the northernmost parts of the State, and elsewhere it was reported as light on the 11th and 12th, in practically every community. Ten days later the warmest period of the month occurred, which culminated in a thunder storm in the southern counties, attended by a damaging hail storm in Cumberland County. As the month was closing a tropical storm center was passing northeastward off the New Jersey coast, with attending gales along shore and fog inland. This barometric depression was preceded by brilliant solar and lunar halos which were very generally observed on the 27th, 28th and 29th, and on the 30th the lowest pressure readings of the month occurred.

The mean stage of the Delaware River at Phillipsburg was 1.2 feet. At Trenton the mean daily stage was 0.6 foot, which was 0.6 foot below normal; highest readings occurred on the 1st, and the lowest on the last six days.

The temperature departure from normal for the year 1917 to date, by sections, is: The Highlands, -1.1°; Red Sandstone Plain, -0.9°; The Southern Interior, -0.9°; The Seacoast, -1.2°. The precipitation accumulated departure from normal for the year 1917 to date, is: The Highlands, -8.50; Red Sandstone Plain, -9.64; The Southern Interior, -3.48; The Seacoast, -3.04.

Storm warnings were displayed along portions of the coast on the 8th, 14th, 15th and 30th.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 37 stations was 61.5°, which was 4.3° below normal. The highest temperature was 87° at Bridgeton and Elizabeth on the 20th, and the lowest, 25°, at Culvers Lake on the 11th. The warmest station was Jersey City, 64.0°, and the coolest, Charlotteburg, 56.3°. The greatest daily range of temperature was 46° at Charlotteburg on the 11th.

PRECIPITATION.

The average total rainfall of the State, as deduced from observations of 42 stations was 2.74 inches, which was 1.23 inches below normal. The greatest monthly rainfall was 6.13 inches at Tuckerton, and the least, 0.47 inch at Newton. The greatest amount to fall in any 24 consecutive hours was 3.10 inches at Tuckerton on the 1st.

The average number of days on which 0.01 inch or more rain fell was 6, which was 2 fewer than normal.

WIND.

The prevailing wind direction was from the northwest, which is not usual for September, with an approximate velocity of 11 miles per hour. The highest velocity was 56 miles per hour from the northeast on the 16th, at Long Branch.

SUNSHINE AND CLOUDINESS.

The average number of clear days throughout the State was 16, which was 2 more than normal; partly cloudy, 7, which was 2 fewer than normal; cloudy, 7, which was normal. The approximate percent. of possible sunshine was 62, which was probably about normal.

MISCELLANEOUS.

Atmospheric pressure, reduced to sea level, averaged 30.12 inches, which was 0.05 inch above normal. Light or killing frosts occurred very generally on the 11th. Scattered thunderstorms occurred on the 1st, 2d, 6th, 8th, 21st and 22d. Hail fell on the 21st. Solar and lunar halos were observed on the 27th, 28th and 29th. Fog was reported on the 2d, 12th, 13th, 14th, 20th, 26th, 27th, 28th and 30th. High winds were noted along shore on the 8th, 15th, 16th, 23d and 30th.

COMPARATIVE DATA FOR SEPTEMBER.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	40 inch or more prec.
1885.....	64.2	93	38	0.83	1.69	0.25	.....	.....	.....	.....
1886.....	66.9	95	36	1.13	1.76	0.86	.....	.....	.....	.....
1887.....	61.6	10	30	3.66	6.25	1.62	.....	.....	.....	.....
1888.....	63.1	84	29	7.09	10.65	3.75	.....	.....	.....	.....
1889.....	64.8	90	34	8.36	13.13	3.17	.....	.....	14	12
1890.....	64.4	91	33	4.75	8.61	2.59	.....	.....	14	14
1891.....	68.7	95	39	2.46	5.91	0.90	10	10	10	10
1892.....	64.2	90	33	1.81	3.78	1.02	15	11	4	6
1893.....	62.7	90	31	3.20	5.38	1.93	12	10	8	8
1894.....	68.8	97	31	7.46	11.65	3.69	10	10	10	8
1895.....	69.7	109	29	1.07	2.71	0.22	17	10	3	5
1896.....	65.1	95	30	4.37	8.74	2.26	19	7	4	5
1897.....	65.5	99	30	1.65	3.97	0.21	19	7	4	5
1898.....	68.6	100	31	2.00	3.87	0.65	17	8	5	6
1899.....	64.4	93	30	5.88	9.61	2.88	15	9	6	9
1900.....	69.9	98	32	2.86	7.37	1.09	14	10	6	6
1901.....	66.8	94	29	3.38	6.82	1.63	15	9	6	10
1902.....	64.6	93	30	5.65	8.95	3.11	11	7	12	13
1903.....	65.0	92	29	3.34	7.10	1.39	17	8	5	7
1904.....	64.8	93	28	4.79	10.08	0.89	14	10	6	7
1905.....	65.4	90	28	5.23	9.18	2.87	16	7	7	5
1906.....	68.9	94	33	2.19	4.66	0.75	15	9	6	7
1907.....	67.1	92	31	8.08	12.95	3.55	10	8	12	14
1908.....	65.7	90	29	2.09	4.13	0.95	11	10	9	3
1909.....	64.5	89	30	3.30	4.58	2.08	11	10	9	8
1910.....	67.3	97	32	2.39	3.97	1.01	12	10	8	6
1911.....	66.4	90	30	2.88	5.33	1.08	10	12	8	9
1912.....	65.9	87	28	4.47	6.76	2.68	12	7	11	10
1913.....	64.4	96	27	3.87	6.55	1.56	13	8	9	9
1914.....	64.0	99	24	0.87	1.64	0.14	21	6	3	3
1915.....	68.5	97	30	2.08	4.46	0.55	17	9	4	5
1916.....	65.2	98	31	2.84	5.29	1.29	20	7	3	7
1917.....	61.5	87	25	2.74	6.13	0.47	16	7	7	6

Climatological data for September, 1917.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.							Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation of in. or more.	Clear.	Pt. cloudy.	Cloudy.		
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	26	60.6	-4.5	82	2†	33	11	35	1.68	-2.24	0.78	0	4	20	2	8	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	25	56.3	-6.0	81	19	27	11	46	1.29	-3.39	0.72	0	4	18	9	3	sw.	George S. Briggs.
Culvers Lake†.....	Sussex.....	848	16	.....	.....	.....	.....	25	11	.....	1.29	-2.52	0.60	0	6	20	7	3	e.	Brice E. Riker.
Dover.....	Morris.....	600	33	58.2 ^a	-4.4	80	19†	32	11	37	1.65	-2.83	0.73	0	5	17	9	4	.....	William C. Harris.
Layton.....	Sussex.....	480	17	57.2	-4.6	79	2	29	11	42	1.14	-2.73	0.45	0	5	19	4	7	nw.	A. M. Depue.
Newton.....	Sussex.....	769	36	59.5 ^a	-4.1	80	2	32	11	32	0.47	-3.21	0.35	0	4	.....	.....	.....	sw.	Irving G. Kern.
Phillipsburg.....	Warren.....	363	35	62.0	-3.4	84	2	35	11	37	2.28	-1.50	0.97	0	8	21	5	4	n.	D. Wilson Smith.
Sussex.....	Sussex.....	442	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. W. Tittsworth.
Means and extremes...	.....	.....	.....	59.0	-4.5	84	2	25	11	46	1.40	-2.63	0.97	0	5	19	6	5	sw.	.....
<i>The Red Sandstone Plain.</i>																				
Bergen Point††*.....	Hudson.....	37	20	62.7 ^d	-4.0	85	2	40	11†	30	.....	.....	1.54	0	.....	.....	.....	.....	nw.	William H. Mitchell.
Boonton.....	Morris.....	400	§27	58.4	.....	85	19	31	11†	44	1.55	-2.94	0.61	0	9	24	1	5	ne.	J. W. Denmers.
Chatham.....	Morris.....	330	15	.....	.....	.....	.....	.....	.....	.....	1.86	-2.27	.....	0	8	20	8	2	.....	Paul Molitor.
Elizabeth.....	Union.....	45	38	62.4	-5.6	87	20	34	11	39	2.73	-1.33	1.43	0	5	10	12	8	nw.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	29	62.5	-2.6	85	20	35	11	38	2.36	-1.62	1.05	0	8	18	7	5	sw.	Hiram E. Deats.
Highwood.....	Bergen.....	90	28	58.9	-5.3	79	27	33	11	34	1.45	-2.71	0.58	0	5	8	16	6	sw.	Charles J. Bates.
Jersey City.....	Hudson.....	10	18	64.0	-3.2	85	20	41	11	28	2.78	-0.93	1.55	0	5	11	9	10	nw.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	30	62.1	-3.9	80	2†	39	11	30	3.56	-0.62	1.35	0	5	15	12	3	n.	Samuel W. Cochran.
Little Falls.....	Passaic.....	180	§14	61.4 ^b	.....	81	2†	.....	.....	.....	1.43	-3.17	0.56	0	4	20	0	10	w.	Montclair Water Co.
Newark.....	Essex.....	159	75	62.4	-3.5	82	3	45	11†	22	2.21	-1.64	1.16	0	5	11	9	10	nw.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	110	64	61.4	-4.6	82	20	36	11	30	3.63	-0.22	1.78	0	7	17	7	6	w.	N. J. Experiment Station.
Palisades Park.....	Bergen.....	80	2	59.8	.....	83	20	32	11	38	1.73	.....	0.75	0	5	16	9	5	nw.	George P. Kirsten.
Paterson.....	Passaic.....	80	46	63.2	-3.0	85	19†	38	11	35	1.41	-3.03	0.58	0	5	6	5	19	sw.	Marion T. Probert.
Plainfield.....	Union.....	100	31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	John Neagle.
Pompton Plains.....	Morris.....	195	15	.....	.....	.....	.....	.....	.....	.....	1.90	-2.65	0.67	5	9	.....	.....	.....	.....	M. S. Taylor
Somerville.....	Somerset.....	60	35	61.0	-4.3	84	20	32	11	39	2.65	-1.01	1.10	0	5	14	6	10	sw.	A. A. Macdonald.
South Orange.....	Essex.....	200	47	60.5	-3.6	80	20	38	11	28	2.09	-2.00	0.95	0	5	20	7	3	sw.	Dr. W. J. Chandler.
New York, N. Y.....	.....	365	47	63.0	-3.5	83	20	43	11	22	2.74	-0.85	1.72	0	6	6	13	11	n.	U. S. Weather Bureau.
Means and extremes...	.....	.....	.....	61.6	-3.9	87	20	31	11†	44	2.22	-1.87	1.78	0	6	15	8	7	nw.	.....
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	36	63.4	-4.8	87	21	39	11†	33	2.19	-1.62	1.34	0	6	17	7	6	ne.	Henry A. Jorden.
Burlington.....	Burlington.....	12	§31	63.2	-3.8	83	21	39	11	33	4.33	+0.41	1.83	0	5	22	1	7	ne.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	25	62.2 ^a	-4.5	83	21	36	11	37	4.31	+0.29	2.04	0	7	21	2	7	ne.	W. Rex B. Sutch.
Hammonton.....	Atlantic.....	103	15	.....	.....	.....	.....	.....	.....	.....	4.09	+0.43	1.60	0	5	25	2	3	sw.	G. H. Parkhurst.
Hightstown.....	Mercer.....	120	25	61.8	-4.8	83	19†	36	11	35	3.31	-0.57	1.64	0	6	14	12	4	.....	G. Franklin Eldridge.
Imlaystown.....	Monmouth.....	185	29	59.6 ^a	-7.1	80	19	36	11	35	4.16	-0.15	1.87	0	5	12	13	5	n.	F. B. Jones.
Indian Mills.....	Burlington.....	76	28	61.4	-4.7	86	20	34	11	43	4.37	+0.20	2.05	0	6	14	7	9	nw.	James M. Armstrong.
Lakewood.....	Ocean.....	54	14	59.6	-5.8	79	20†	34	12	33	3.97	+0.09	1.83	0	5	11	4	15	ne.	R. W. Holman.
Moorestown.....	Burlington.....	75	55	62.4	-3.6	79	2†	41	12	29	3.95	+0.19	1.66	0	4	19	4	7	nw.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	10	.....	.....	.....	.....	.....	.....	.....	2.92	.....	1.67	0	6	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	19	.....	.....	.....	.....	.....	.....	.....	3.20	-0.21	1.68	0	7	22	0	8	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	46	62.0	-4.9	81	19	40	11	28	3.89	+0.30	1.69	0	8	11	9	10	ne.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	24	62.1	-3.9	86	26	35	12	36	6.13	+2.77	3.10	0	7	16	10	4	se.	Frank R. Austin.
Vineland.....	Cumberland.....	109	49	63.8	-3.1	85	21	39	11	32	2.76	-1.08	1.34	0	6	20	4	6	sw.	H. C. Himes.
Woodbine.....	Cape May.....	43	26	63.4	-2.9	82	21	37	12	32	3.04	-0.99	1.28	0	8	12	15	3	e.	Baron de Hirsch Agr. Sch.
Philadelphia, Pa.....	.....	117	47	64.4	-3.0	82	20	43	11	21	3.27	-0.11	1.38	0	7	8	11	11	nw.	U. S. Weather Bureau.
Means and extremes...	.....	.....	.....	62.1	-4.5	87	21	34	11†	43	3.77	0.00	3.10	0	6	17	6	7	ne.	.....
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	28	62.6	-4.3	82	20	44	11	24	2.92	-0.32	1.50	0	6	14	7	9	ne.	Wilbur H. Panecost.
Atlantic City.....	Atlantic.....	16	44	63.1	-4.5	83	21	44	11	25	2.70	-0.35	1.70	0	7	9	11	10	ne.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	33	63.6	-5.4	81	21	42	11	20	2.06	-0.94	0.98	0	7	13	10	7	n.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	10	61.8	.....	81	20	42	12	26	5.19	.....	2.76	0	6	9	13	8	n.	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	19	63.6	-3.8	80	20	49	11	20	2.25	-1.79	1.13	0	6	9	13	8	ne.	U. S. Weather Bureau.
Means and extremes...	.....	.....	.....	62.9	-4.5	83	21	42	11†	26	3.02	-0.85	2.76	0	6	11	11	8	ne.	.....
For the State.....	.....	.....	.....	61.5	-4.3	87	20†	25	11	46	2.74	-1.23	3.10	0	6	16	7	7	nw.	.....

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

* Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

†† Precipitation is less than 0.01 inch rain or melted snow.

‡ Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne.

Daily precipitation for September, 1917.

Stations.	Watersheed.	Day of month.																															Total.		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
<i>The Highlands and Kittatinny Valley.</i>																																			
Belydère.....	Delaware.....	.59							.78							.12																			
Charlotteburg.....	Passaic.....	.25						.07	.72																					.19					
Culvers Lake.....	Delaware.....	.38	.05					.03	.60																					.25		T.			
Dover.....	Passaic.....	.55						.10	.73																					.18		.05			
Layton.....	Delaware.....	.34						.03	.45																					.25		.02			
Newton.....	Delaware.....	.01							.06																					.26		.06			
Phillipsburg.....	do.....	.61	.07					.13	.15	.97							.18													.35		.05			
Sussex.....	Hudson.....																													.16		.01			
<i>The Red Sandstone Plain.</i>																																			
Bergen Point.....	Coast.....	1.54						.10	.95																										
Boonton III.....	Passaic.....	.10	.44	.01				.03	.04	.61	.01																					T.			
Chatham I.....	do.....	*	.67					*	.73	.03																				.30	.01	T.			
Elizabeth.....	Coast.....	1.43	T.					.04	.92	.03																					.41	.02	T.		
Flemington.....	Raritan.....	.55	.01					.06	.03	1.05						.30															.31		.03		
Highwood.....	Hackensack.....	.32						.11	.58																						.34		.10		
Jersey City**.....	Coast.....	1.55						.06	.83						T.																.26		.08		
Lambertville.....	Delaware.....	1.35						.23	1.27							.26															.45				
Little Falls**.....	Passaic.....	.48						.07	.56																						.32		T.		
Newark**.....	Coast.....	1.16						.02	.71																						.31		.01		
New Brunswick.....	Raritan.....	1.78	T.					.06	.01	1.28						.26															.21		.03		
Palisades Park.....	Hackensack.....	.75	T.					.06	.60																						.23		.09		
Paterson.....	Passaic.....	.45						.04	.58																						.31		.03		
Plainfield**.....	Raritan.....																																		
Tompton Plains I.....	Passaic.....	.06	.61					.04	.06	.61	.07																								
Tomererville.....	Raritan.....	.98	T.					.04	1.10							.21															.34	.08	.05		
South Orange.....	Rahway.....	.95						.06	.76																										
New York, N. Y.***	Coast.....	1.72						.02	.73							T.	.01	T.													.25		.07		
<i>The Southern Interior.</i>																																			
Bridgeton.....	Coast.....	.10						.05	1.34						T.	.10																			
Burlington.....	Delaware.....	1.83						T.	.60						*	.60															.30				
Layton.....	Maurice.....	2.04	.02		T.			.03	T.	1.19	T.					.66	T.	T.													.35	T.	T.		
Lammonton.....	Mullica.....	1.41						T.	.60							.42																.62			
Lightstown.....	Raritan.....	.81	.01					.05	1.64							.51																.29			
Maytown.....	Delaware.....	1.73						.05	1.87																							.29			
Median Mills.....	Mullica.....	2.05						.04	1.49							.43																.68			
Metedeconk.....	Metedeconk.....	1.38	T.					.05	1.83							.41																.33			
Northfield.....	Delaware.....	1.19						T.	1.66							.36	T.															.35			
Northfield.....	Coast.....	.61						T.	1.67							.82																.28			
Peasantryville.....	Coast.....	.92						T.	1.68							.05															.19	.01			
Peasantryville.....	Delaware.....	1.69	.01					.05	.11	1.33						.10	T.															.40		.02	
Peasantryville.....	Coast.....	3.10	.03					.10	1.43							.39																.30		T.	
Peasantryville.....	Maurice.....	.20	T.					.01	T.	1.34	T.	T.				.23																.64		.65	
Peasantryville.....	Coast.....	.56						.08	1.28							.58	.06															.68			
Philadelphia, Pa.....	Delaware.....	.93						.01	.24	1.14						T.	.69															.38	.05		
<i>The Sea Coast.</i>																																			
Abnery Park.....	Coast.....	1.50	T.					.01	.92							.02	.25																		
Atlantic City***.....	do.....	.30	T.					T.	.11	1.59						.03																.22		T.	
Atlantic City***.....	do.....	.05						.10	.98							.45	.03															.26		.01	
Atlantic City***.....	do.....	2.76	T.					.06	.01	1.76						T.	.40															.44			
Atlantic City***.....	do.....	.74						.02	T.	1.13						.02	.16															.20		T.	
Atlantic City***.....	do.....																															.18		T.	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded.

‡ Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.

* Precipitation included in the next following measurement. **Precipitation for 24-hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.			Moisture.		Sun-	
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	Percentage of possible sunshine.
							Miles per hour.	Direction.	Date.			
Atlantic City.....	30.12	30.49	23	29.61	30	s	28	ne.	16	80	76	61
Pe May City.....	30.14	30.46	23	29.65	30	s	32	e.	16			
ing Branch.....	30.12	30.52	23	29.54	30	12	56	ne.	16	80	74	64
ark.....							24	e.	16	58*	57	56
ew York, N. Y.....	30.11	30.52	23	29.56	30	13	51	nw.	30	74		63
lisades Park.....	30.07	30.49	23	29.51	30							
iladelphia, Pa.....	30.14	30.50	23	29.61	30	9	33	n.	10	76	66	60
ndy Hook.....	30.11	30.51	23	29.57	30	11	43	w.	30	80	73	70
enton.....	30.11	30.50	23	29.58	30	10	34	n.	10	79	69	60

§ Two directions and dates

* 7 a. m. † 9 p. m. ‡ 5 p. m.

Daily temperatures for September, 1917.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.
<i>The Highlands and Kittatinny Valley</i>																																
Belvidere.....	Maximum...	76	82	79	74	72	75	74	66	67	62	66	70	71	77	72	69	74	78	81	82	77	70	65	64	77	78	80	75	74	70	73.2
	Minimum...	64	65	61	53	48	44	45	50	45	50	33	35	41	46	54	49	43	51	49	50	52	42	38	40	50	46	45	58	44	48	48.0
Charlotteburg.....	Maximum...	70	80	70	71	70	74	72	56	69	61	61	70	78	68	65	61	72	76	81	72	72	65	60	64	69	77	75	64	65	69.2	
	Minimum...	61	61	60	48	40	45	45	49	37	27	28	32	37	41	45	42	47	48	43	48	40	38	33	51	39	39	52	38	40	43.4	
Dover.....	Maximum...	66	77	77	72	72	72	70	56	69	61	61	68	75	75	69	71	75	80	80	75	67	63	62	69	75	78	72	69	67	70.4	
	Minimum...	62	62	56	51	45	52	46	49	41	42	32	33	38	42	49	43	55	51	53	41	33	36	51	44	45	50	43	45	45	46.1	
Layton.....	Maximum...	72	79	77	70	71	74	71	59	68	62	64	72	73	73	68	65	69	72	75	75	69	66	68	65	67	71	71	68	67	67	69.6
	Minimum...	61	64	59	48	40	48	40	50	43	49	29	30	48	43	45	46	43	50	43	48	50	37	30	34	47	42	40	53	40	41	44.8
Newton.....	Maximum...	70	80	74	70	73	72	69	60	67	61	60	67	75	78	69	65	70	77	78	79	73	67	63	60	47	42	40	53	40	41	44.8
	Minimum...	62	62	60	51	45	55	47	55	42	46	32	35	43	44	50	51	42	54	52	53	55	43	36	40	49	48	58	50	50	50	48.7
Phillipsburg.....	Maximum...	72	84	80	75	76	75	74	68	72	66	65	71	78	79	71	74	75	82	82	78	69	67	65	76	77	79	76	73	66	73	73.8
	Minimum...	64	65	62	54	46	56	48	52	46	51	35	38	41	45	54	57	46	57	57	52	55	44	39	41	50	48	46	59	45	50	50.1
Sussex.....	Maximum...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Minimum...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<i>The Red Sandstone Plain.</i>																																
Bergen Point.....	Maximum...	68	85	80	74	76	75	72	61	.....	61	63	70	75	76	.....	.....	.....	77	82	83	81	69	64	60	75	77	80	75	73	70	73.2
	Minimum...	59	64	60	53	54	57	51	53	48	.....	40	40	50	49	.....	.....	.....	53	54	55	57	51	51	49	53	50	56	52	49	50	52.2
Boonton§§.....	Maximum...	68	79	78	74	74	75	75	58	72	62	64	70	80	80	74	70	75	78	85	81	77	70	66	65	74	78	77	74	70	69	73.1
	Minimum...	62	62	63	52	43	49	45	50	39	53	31	31	36	39	48	50	42	48	46	45	51	42	37	37	48	41	42	53	43	44	45.8
Elizabeth.....	Maximum...	70	81	84	80	77	76	78	65	74	68	67	75	79	78	71	71	76	82	85	87	83	73	69	63	73	80	82	77	76	74	75.8
	Minimum...	64	65	62	54	46	52	46	50	45	44	34	36	41	44	56	54	45	51	51	51	54	44	41	41	53	47	51	57	46	46	49.0
Flemington.....	Maximum...	71	83	80	74	76	75	76	70	71	65	65	73	80	77	69	69	77	80	84	85	78	70	65	64	75	80	78	77	73	70	74.3
	Minimum...	65	65	64	56	48	56	50	56	47	54	35	37	42	45	56	54	47	50	56	52	55	48	42	42	50	49	46	59	46	48	50.7
Highwood.....	Maximum...	68	76	77	72	70	74	71	60	67	62	60	68	73	75	68	65	68	76	78	80	76	65	61	60	69	75	79	75	73	70	70.1
	Minimum...	63	63	60	50	45	53	45	52	43	49	33	34	39	43	53	53	45	52	46	48	53	44	36	41	55	43	45	57	45	44	47.7
Jersey City.....	Maximum...	69	77	82	78	74	76	74	63	72	67	65	72	77	77	70	67	71	79	80	85	81	71	66	60	71	77	79	75	73	70	73.3
	Minimum...	65	64	64	57	54	60	54	54	50	41	45	49	53	59	57	51	56	58	58	61	52	47	50	54	52	56	63	53	51	51	54.7
Lambertville.....	Maximum...	74	80	74	73	73	72	71	67	69	66	62	69	75	75	71	67	72	71	80	80	76	70	69	62	70	74	74	74	72	68	71.7
	Minimum...	65	66	63	57	49	59	52	53	51	53	39	41	45	47	57	55	46	51	56	55	58	50	44	46	52	52	50	61	51	51	52.5
Little Falls.....	Maximum...	69	81	78	74	73	75	74	61	72	62	62	69	76	77	72	73	78	81	81	76	69	65	66	72	75	79	75	75	72	71	72.7
	Minimum...	65	.....	58	53	47	56	48	50	45	45	.....	52	52	52	55	52	55	59	44	38	41	38	41	54	48	46	45	45	47	47	50.1
Newark.....	Maximum...	68	81	82	74	75	75	74	64	75	64	64	69	73	70	65	63	67	75	76	77	72	62	61	60	71	72	72	69	68	66	70.4
	Minimum...	66	67	68	60	56	60	58	58	56	47	45	48	51	51	55	53	49	56	57	55	55	50	45	48	55	53	57	57	53	52	54.7
New Brunswick.....	Maximum...	70	80	78	75	73	74	77	64	70	63	62	69	74	71	65	64	68	78	81	82	80	70	62	60	72	77	76	74	72	68	71.6
	Minimum...	64	64	64	55	49	56	50	52	45	55	36	39	44	45	56	53	46	51	56	52	57	47	42	45	54	50	50	59	49	47	51.1
Palisades Park.....	Maximum...	69	79	79	72	72	76	73	58	71	65	63	72	78	77	69	69	69	81	81	83	78	67	62	60	72	78	80	74	72	70	72.3
	Minimum...	65	63	56	49	46	52	44	48	42	38	32	35	40	43	54	53	43	52	48	49	54	44	40	42	54	45	46	52	45	46	47.3
Paterson.....	Maximum...	72	80	81	78	75	78	75	65	70	67	66	73	80	79	71	69	75	81	85	85	80	71	69	63	72	80	82	75	75	72	74.8
	Minimum...	64	63	63	55	50	58	50	52	47	54	38	42	45	48	54	53	45	53	54	55	58	49	40	45	55	49	52	60	50	49	51.7
Plainfield.....	Maximum...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Minimum...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Somerville.....	Maximum...	71	82	80	77	74	74	69	70	67	66	69	76	74	69	68	72	79	83	84	79	70	66	65	74	78	78	77	73	69	69	73.6
	Minimum...	63	63	60	55	43	51	45	51	41	57	32	36	37	42	56	56	46	50	54	49	52	42	41	42	52	46	55	44	46	46	48.4
South Orange.....	Maximum...	67	77	77	71	70	74	70	59	69	60	59	67	71	73	66	67	70	75	78	80	76	67	61	61	70	73	75	73	69	63	69.6
	Minimum...	64	64	63	55	54	54	52	53	44	46	38	39	45	47	56	54	48	53	56	55	57	47	44	44	54	53	52	56	47	49	51.4
New York, N. Y.....	Maximum...	71	75	78	71	71	73	71	62	69	61	60	70	74	73	69	65	68	76	79	83	77	66	61	60	70	75	75	72	70	67	70.4
	Minimum...	64	63																													



Scale of Shades.



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U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU

CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

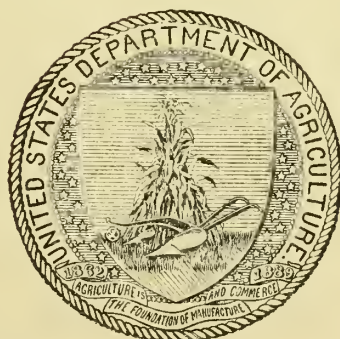
NEW JERSEY SECTION

OCTOBER, 1917.

BY

G. HAROLD NOYES

METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
NOVEMBER 19, 1917.

Departure of the Mean Temperature from the Normal, October, 1917.



Shaded portions show excess (+).
 Unshaded portions show deficiency (-).
 Lines show amount of excess or deficiency.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

VOL. XXX. TRENTON, N. J., OCTOBER, 1917. No. 10.

GENERAL SUMMARY.

The cool weather that prevailed in New Jersey in September, 1917, continued with remarkable uniformity through October, culminating in a "Cold Wave" on the 31st, when temperatures were well down in the twenties, and with an extreme minimum of 17°. In fact, there were only about seven days with temperatures up to normal, or above. This in connection with the low temperatures of the preceding month, and the excess of rain, has made Autumn seem long, and tends to forebode a long or "hard" winter. But weather that occurs one month is utterly without intimation of what is to follow in the next month.

While it rained a little more frequently than usual, the excess was due principally to the storms of the 24th and 30th, when amounts of fall were very generally above one and two inches. This rain supplied a greater amount of soil moisture than has been present for a long time, and lakes, springs and streams were unusually full, resulting in a moderate freshet in the Delaware River at the close of the month, which rose rapidly to a threatening stage. The principal dates of rain were: scattered amounts on the 4th, late on the 5th, 9th, 11th in the south, 12th, 20th, 24th, 28th and 30th.

An earthquake of very moderate force occurred on the 19th, several shocks having been felt in the vicinity of Pleasantville, Northfield, Somers Point and Ocean City, from about 12:05 p. m. to about 2:53 p. m. Similar disturbances in the same section heretofore have been locally denominated "sand slipping."

The mean stage of the Delaware River at Phillipsburg was 1.7 feet, with the highest stage of 15.0 feet at 3 p. m. on the 31st. At Trenton the mean daily stage was 0.9 foot, which was 0.7 foot below normal; the highest stage being 8.5 feet at 5:30 p. m. of the 31st.

The temperature departure from normal for the year 1917 to date, by sections, is: The Highlands, -1.3°; Red Sandstone Plain, -1.1°; The Southern Interior, -1.1°; The Seacoast, -1.4°. The precipitation accumulated departure from the normal for the year 1917 to date, is: The Highlands, -6.29; Red Sandstone Plain, -6.72; The Southern Interior, +0.65; The Seacoast, +0.20.

Storm warnings were displayed along the coast on the 9th, 2th, 19th, 21st, 23d, 24th and 30th.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 36 stations was 50.7°, which was 3.4° below normal. The highest temperature was 84° at Indian Mills on the 5th, and the lowest, 17°, at Culvers Lake on the 31st. The warmest station was Cape May, 53.7°, and the coolest, Charlotteburg, 46.8°. The greatest daily range of temperature was 1° at New Brunswick on the 20th. The station deficiency in temperature ranged from 2° to nearly 6°.

PRECIPITATION.

The average total rainfall of the State, as deduced from observations of 43 stations, was 6.99 inches, which was 3.24 inches greater than normal. Traces of snow fell on the afternoon of the 30th in northern districts. The greatest monthly amount of rain was 9.74 inches at Lakewood, and the least, 4.28 inches at Lambertville. The greatest rainfall in any 24 consecutive hours was 3.67 inches at Lakewood on the 24th. The average number of days on which 0.01 inch or more rain fell was 10, which was 2 more than normal.

WIND.

The prevailing wind direction for the month was from the northwest, with an approximate velocity of 14 miles per hour, which was somewhat above normal. The highest velocity, sustained for 5 consecutive minutes, was 84 miles per hour from the northeast at Long Branch on the 24th.

SUNSHINE AND CLOUDINESS.

The average number of clear days throughout the State was 15, which was 1 more than normal; partly cloudy, 8, or normal; cloudy, 8, or 1 less than normal. The approximate percent. of possible sunshine was 63, and was somewhat in excess of normal.

MISCELLANEOUS.

Atmospheric pressure, reduced to sealevel, averaged 30.06 inches, which was 0.01 inch below normal; highest readings occurred on the 18th, and the lowest on the 30th. Killing frosts, where they had not already occurred, were reported on the 7th, 13th, and on the coast on the 31st. Sleet and snow occurred on the 30th. Thunder storms occurred on the 5th, 6th, 27th, 28th and 30th. Solar halo, Layton, 3d. High winds occurred on the 12th, 19th, 23d, 24th, 25th, 27th, 28th and 30th. Dense fog was observed on the 3d, 4th, 16th, 26th and 27th.

COMPARATIVE DATA FOR OCTOBER.

Year.	Temperature.			Precipitation.			No. of days.				
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more precip.	
1885.....	54.2	82	29	4.20	5.85	2.91					
1886.....	55.6	83	21	3.22	8.16	2.02					
1887.....	52.3	89	21	2.61	5.00	1.58					
1888.....	49.2	73	25	4.73	7.00	2.97				7	
1889.....	50.8	82	23	3.80	5.03	2.42				10	
1890.....	53.9	81	24	6.33	10.18	3.40	9	8	14	12	
1891.....	52.8	92	18	3.44	5.57	1.88	11	11	9	8	
1892.....	53.6	85	21	0.52	1.09	0.04	14	12	5	4	
1893.....	55.2	85	17	4.22	6.59	1.74	15	7	9	7	
1894.....	55.3	87	27	5.67	8.23	3.90	12	8	12	10	
1895.....	49.9	83	18	3.60	5.53	1.62	19	7	5	5	
1896.....	51.5	82	21	2.24	4.58	1.27	11	8	12	8	
1897.....	55.8	95	22	2.43	6.49	0.87	14	8	9	7	
1898.....	56.5	88	24	5.76	8.42	3.92	13	9	9	10	
1899.....	56.6	86	18	2.72	4.65	1.07	13	10	8	7	
1900.....	59.9	92	19	3.70	6.59	1.47	10	8	13	10	
1901.....	54.4	82	21	1.93	4.45	0.87	17	8	6	4	
1902.....	56.0	80	20	6.39	9.35	3.82	15	7	9	8	
1903.....	55.9	86	24	8.92	16.19	4.17	13	9	9	8	
1904.....	51.9	89	15	3.78	7.01	1.50	20	6	5	5	
1905.....	55.5	90	17	2.71	4.83	0.75	18	7	6	7	
1906.....	55.0	80	17	4.46	7.14	2.66	8	9	14	11	
1907.....	59.6	80	18	4.46	7.18	2.70	22	5	4	7	
1908.....	57.3	92	19	2.71	5.14	1.30	15	5	11	8	
1909.....	51.2	84	18	1.18	1.82	0.40	17	7	7	8	
1910.....	57.2	90	18	3.15	5.55	1.55	15	8	8	7	
1911.....	53.9	80	18	5.49	8.23	2.61	10	9	12	12	
1912.....	57.0	88	25	3.30	6.95	1.72	17	8	6	5	
1913.....	57.8	83	25	7.79	13.84	2.70	12	9	10	11	
1914.....	58.1	88	19	1.99	3.08	0.90	13	9	9	5	
1915.....	56.2	84	23	3.03	5.18	1.89	17	7	7	9	
1916.....	55.1	92	23	1.37	2.38	0.51	18	8	5	4	
1917.....	50.7	84	17	6.99	9.74	4.28	15	8	8	10	

Climatological data for October, 1917.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.							Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation 40 in. or more.	Clear.	Pt. cloudy.	Cloudy.		
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	26	50.4 ^b	-2.1	76	3	25	31	40	5.49	+1.65	1.84	0	8	15	9	7	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	25	46.8 ^a	-3.6	70	19	22	21	37	6.87	+2.46	2.77	T.	9	16	11	4	n.	George S. Briggs.
Culvers Lake.....	Sussex.....	848	16	.....	.....	.....	.....	17	31	.....	6.26	+2.61	2.05	T.	9	17	6	8	s.	Brice E. Riker.
Dover.....	Morris.....	600	33	47.3 ^b	-3.4	71	19	25	31	.....	6.02	+2.02	1.62	0	13	5	18	8	.....	William C. Harris.
Layton.....	Sussex.....	480	17	47.4	-2.2	69	4†	23	21	36	6.50	+3.17	1.94	0	11	13	1	17	sw.	A. M. Depue.
Newton.....	Sussex.....	769	36	48.0	-3.7	72	19	26	31	28	.....	.....	.....	T.	.....	.....	.....	.....	.....	Irving G. Kern.
Phillipsburg.....	Warren.....	363	35	50.0	-2.9	73	19	27	31	35	4.96	+1.36	1.44	0	10	16	4	11	w.	D. Wilson Smith.
Sussex.....	Sussex.....	442	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. W. Titsworth.
Means and extremes...		.....	.....	48.3	-3.1	76	3	17	31	40	6.02	+2.21	2.77	T.	10	14	8	9	sw.	
<i>The Red Sandstone Plain.</i>																				
Bergen Point††*.....	Hudson.....	37	20	51.0 ^f	-3.3	75	5	30	31	35	7.86	+3.78	2.44	0	7	.....	.....	.....	nw.	William H. Mitchell.
Boonton.....	Morris.....	400	27	48.6	.....	74	5†	22	23	41	6.32	+2.48	2.61	T.	14	21	6	4	sw.	J. W. Demmers.
Chatham.....	Morris.....	330	15	.....	.....	.....	.....	.....	.....	.....	6.23	+2.56	2.05	0	12	17	9	5	.....	Paul Molitor.
Elizabeth.....	Union.....	45	38	51.2	-3.5	78	5	27	21†	36	7.86	+4.04	2.80	0	9	13	12	6	nw.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	29	51.6	-2.5	78	19	28	31	37	50.1	+1.56	1.60	0	9	17	8	6	nw.	Hiram E. Deats.
Highwood.....	Bergen.....	90	28	48.8	-3.9	71	4†	26	21	32	7.93	+3.40	2.60	0	11	10	11	10	nw.	Charles J. Bates.
Jersey City.....	Hudson.....	10	18	52.6	-3.0	74	4†	31	31	26	7.06	+3.31	2.90	0	11	11	11	9	nw.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	30	51.6	-2.0	74	5	30	31	28	4.28	+0.41	1.25	0	8	16	9	6	nw.	Samuel W. Cochran.
Little Falls.....	Passaic.....	180	14	50.1 ^e	.....	72	5†	28	21	32	7.41	+3.57	2.94	0	8	21	1	9	w.	Montclair Water Co.
Newark.....	Essex.....	159	75	.....	.....	72	5	31	31	21	7.05	+3.28	2.26	0	8	16	6	9	n.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	110	64	51.4	-3.2	77	5	28	31	41	7.34	+3.75	2.40	0	11	17	9	5	sw.	N. J. Experiment Station.
Palisades Park.....	Bergen.....	80	2	48.8	.....	73	4	28	31	33	7.98	.....	2.75	0	9	16	8	7	s.	George P. Kirsten.
Paterson.....	Passaic.....	80	46	52.3	-2.1	75	4	29	31	31	6.39	+2.24	2.57	0	12	4	4	23	nw.	Marion T. Probert.
Plainfield.....	Union.....	100	31	.....	.....	76	19	27	31	.....	6.84	+3.19	.....	0	.....	.....	.....	.....	.....	John Neagle.
Pompton Plains.....	Morris.....	195	15	.....	.....	.....	.....	.....	.....	.....	6.46	+2.70	2.94	0	14	.....	.....	.....	.....	M. S. Taylor.
Somerville.....	Somerset.....	60	35	49.8	-3.6	77	19	25	31	37	5.28	+1.87	1.89	0	10	13	7	11	nw.	A. A. Macdonald.
South Orange.....	Essex.....	200	47	49.6	-3.3	72	19	29	31	33	8.44	+4.63	3.32	T.	8	15	5	11	nw.	Dr. W. J. Chandler.
New York, N. Y.....	.....	365	47	52.0	-3.6	74	5	29	31	30	5.68	+1.97	2.06	0	10	10	8	13	nw.	U. S. Weather Bureau.
Means and extremes...		.....	.....	50.6	-3.0	78	5†	22	23	41	6.81	+2.92	3.32	0	10	15	7	9	nw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	36	53.1	-3.6	82	5	26	31	34	8.79	+5.26	2.58	0	8	20	5	6	se.	Henry A. Jorden.
Burlington.....	Burlington.....	12	31	52.2	-2.5	79	5	29	31	35	8.23	+4.78	2.80	0	9	23	1	7	nw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	25	51.5	-3.6	80	5	26	31	34	9.25	+5.74	2.56	0	10	21	3	7	sw.	W. Rex B. Sutch.
Hammonton.....	Atlantic.....	103	15	.....	.....	.....	.....	.....	.....	.....	8.54	+5.06	2.24	0	10	26	3	2	sw.	G. H. Parkhurst.
Hightstown.....	Mercer.....	120	25	50.2 ^a	-3.5	79	5	27	31	38	7.19	+2.96	2.19	0	10	14	12	5	.....	G. Franklin Eldridge.
Imlaystown.....	Monmouth.....	185	29	50.2 ^f	-4.7	70	4†	26	31	.....	6.70	+2.63	2.50	0	9	.....	.....	.....	w.	F. B. Jones.
Indian Mills.....	Burlington.....	76	28	50.8	-3.6	84	5	25	31	40	9.38	+5.80	3.06	0	10	12	11	8	nw.	James M. Armstrong.
Lakewood.....	Ocean.....	54	14	49.4	-5.9	77	5	28	14†	34	9.74	+6.04	3.67	0	10	12	6	13	nw.	R. W. Holman.
Moorestown.....	Burlington.....	75	55	51.8	-2.4	78	5	28	31	32	7.59	+3.95	2.45	0	10	11	14	6	nw.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	10	.....	.....	.....	.....	.....	.....	.....	6.03	.....	1.50	0	11	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	19	.....	.....	.....	.....	.....	.....	.....	6.33	+2.71	1.84	0	9	19	4	8	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	46	51.6	-4.0	79	5	29	31	35	5.30	+1.89	1.32	0	10	12	11	8	w.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	24	51.8	-3.0	78	4†	25	31	37	5.51	+1.84	1.48	0	10	15	13	3	nw.	Frank R. Austin.
Vineland.....	Cumberland.....	109	49	52.8	-2.6	81	5	26	31	31	8.60	+5.14	2.78	0	10	20	5	6	sw.	H. C. Himes.
Woodbine.....	Cape May.....	43	26	52.5	-3.1	80	5	26	31	31	7.59	+4.00	2.15	0	10	17	8	6	sw.	Baron de Hirsch Agr. Sch.
Philadelphia, Pa.....	.....	117	47	53.8	-2.5	78	5	32	31	29	6.04	+2.94	2.26	0	10	13	9	9	nw.	U. S. Weather Bureau.
Means and extremes...		.....	.....	51.5	-3.5	84	5	25	31	40	7.65	+4.13	3.67	0	10	17	7	7	nw.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	28	50.8	-4.8	74	4	29	31	32	6.75	+2.97	2.95	0	11	17	8	6	se.	Wilbur H. Pancoast.
Atlantic City.....	Atlantic.....	16	44	52.8	-4.6	75	4	29	31	30	5.97	+2.67	1.83	0	12	18	4	9	nw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	33	53.7	-5.9	77	4	32	31	25	7.51	+4.21	2.21	0	11	19	7	5	s.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	10	49.9	.....	73	4	29	31	29	8.23	.....	3.09	0	11	12	12	7	w.	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	19	52.6	-4.1	70	4	33	31	28	5.52	+1.92	1.79	0	10	10	16	5	s.	U. S. Weather Bureau.
Means and extremes...		.....	.....	52.0	-4.8	77	4	29	31	32	6.80	+2.94	3.09	0	11	15	9	6	s.	
For the State.....		.....	.....	50.7	-3.4	84	5	17	31	41	6.99	+3.24	3.67	0	10	15	8	8	nw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

* Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne.

Daily precipitation for October, 1917.

Stations.	Watershed.	Day of month.																															Total.		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
The Highlands and Kittatinny Valley.																																			
Belvidere	Delaware				*		.39						.68								.89				1.25				.44		1.84		5.19		
Charlotteburg	Passaic				.05	*	.45			.13			.84						T.		.45				2.77				.52		1.66		6.87		
Culvers Lake	Delaware	T.			.12	.02	.20						.83			T.	.05				.83				1.63				.53		2.05		6.26		
Over	Passaic				.03	*	.58			.12			1.07			.01	.07			*	.44				1.62				*	.48		1.60		6.02	
Wayton	Delaware	.09			.15	.05	.04						.74			T.	.08				1.07				1.88				.45	.04	1.94	.06	6.50		
The Red Sandstone Plain.																																			
Argen Point	Coast				T.	T.	.52		T.	.85			1.10								.56				2.44			T.	.45		1.94		7.86		
Bonton III	Passaic	.01			.01	.01	.47			T.	.13			.75			.01	.01			.30				1.06	1.55			.75		.28	.98	6.32		
Batham II	do.	.07				.02	.68			.01	.23			.71							.48				.79	1.26			.65		.29	1.04	6.23		
Elizabeth	Coast				T.		.72		T.	*	.38			*	.78						.55				2.80				.54		2.09		7.86		
Lemington	Raritan				.02	T.	.26			.16	T.			.69	.03		T.			T.	T.	.53			1.60				.58		1.14		5.01		
Lighthouse	Hackensack				T.	1.04	.60		.03	.29	.03			.74			T.	.04				.46				2.60				.48		1.62		7.93	
Jersey City**	Coast				T.	.60	.01		.02	.33	.37			.72			T.	.01		T.	.11	.38				2.90			.41		1.57		7.66		
Lumberville	Delaware				T.					.58			.04	.61							.48				1.25				.55		.67		4.28		
Little Falls**	Passaic				T.	.69	T.		T.	.23			T.	.77			T.	T.			.09	.33			2.94				.38	T.	1.98		7.41		
Newark**	Coast				1.37					.29				.68			T.	T.			.03	.49			2.26				.58		1.35		7.05		
New Brunswick	Raritan				T.	.05	.52			.30	.06	T.	.69	.12			.01			T.	.65				2.40				.72		1.82		7.34		
Palisades Park	Hackensack				T.	.08	1.37		T.	.37	T.			.70				.03				.44				2.75				.42	T.	1.82		7.98	
Paterson	Passaic				T.	.61			.01	.18	.03			.62	.08			.02	.03			.22				2.57				.45		1.57		6.39	
Plainfield**	Raritan																																16.84		
Rompton Plains I	Passaic	.04			T.	.03	.04	.51		.02	.17			.68				.02				.43				1.12	1.82			.54		.34	.70	6.46	
Romerville	Raritan				*		.33			.21	.03			.63	.09						.48					1.89				.57		1.05		5.28	
South Orange	Rahway				T.	.70			T.	.30				.81						T.		.44				3.32			*	1.00		1.87		8.44	
New York, N. Y***	Coast				T.	.65	.01		.01	.34			T.	.74					T.		.05	.32			2.06				.31		1.19		5.68		
The Southern Interior.																																			
Bridgeton	Coast					.61			*	.55	T.	1.28									1.10				2.58				.52		2.15		8.79		
Burlington	Delaware				T.	.55			.41	.08	.32	.57									.78				2.80				.90		1.82		8.23		
Wayton	Maurice				T.	T.	.59			.60	.04	.55	.59	.07							.95				2.56				1.16		2.14		9.25		
Wilmington	Mullica					.68			*	*	1.20	*	.59								.82				2.24				.95		2.06		8.54		
Wrightstown	Raritan				.02		.47			.32	.06			.73							.01	.68			2.19				.59		2.12		7.19		
Wilmington	Delaware					.37			*	*	*	1.08									.42				2.50				.63		1.70		6.70		
Indian Mills	Mullica				T.	.51			.52	.10	.34	.40	.30							T.		.78				3.06				1.47		1.90		9.38	
Wakewood	Metedeconk				T.	.36			.42	.05	.34	.55	.12								.56				3.67				1.12		2.55		9.74		
Westtown	Delaware				T.	.59			.42	.08	.29	.45	.08								.85				2.45				.59		1.79		7.59		
Northfield	Coast					.56			.40	.17	.70	.15	.18								.51				1.50				.01	.36		1.49	6.02		
Eastonville	Coast					.54			.43	.07	.65	.38									.49				1.84				.42		1.51		6.33		
Easton***	Delaware				.02	.45			T.	.39		.14	.60						T.		.26	.38			1.16				.58		1.32		5.30		
Blackerton	Coast					.37			.37	.17	.62	.30	.11								.57				1.48				.29		1.10		5.51		
Wenland	Maurice					.66	T.		.40	.08	.68	.49	.10							T.	T.	.96	T.		2.78				.47	T.	1.98		8.60		
Woodbine	Coast					.65			.45	.23	.65	.15	.24								.62				2.15				.50		1.95		7.59		
Philadelphia, Pa.	Delaware				.01	.23			T.	.31		.30	.43							T.	.53	.24			T.	2.26			.70		.63		6.04		
The Sea Coast.																																			
Easton Park	Coast					.20	.03			.03	.32	.34	.60								.05	.31				2.95			T.	.76		1.16		6.75	
Atlantic City***	do.				.58	.08				.57	.01	.59	.25								.06	.27				1.48				.20	.05	T.	1.83		5.97
Pe May City	do.					.62				.50	.12	.82	.36	.01							.67				2.21				.10	.08	2.02		7.51		
Long Branch**	do.				T.	.40	.03		T.	.40		.10	.76								.10	.36			3.09				.96	.01	2.02		8.23		
Andy Hook***	do.				T.	.30	.02			.25		.03	.69							T.	T.	.40			1.79				.39	.01	1.64		5.55		

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded.

|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.

* Precipitation included in the next following measurement. **Precipitation for 24-hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.			Moisture.		sun- shine	
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.		Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	Percentage of possible sunshine.	
							Miles per hour.	Direction.				
												Date.
Atlantic City.....	30.08	30.27	17	29.41	30	9	38	se.	24	77	76	66
Pe May City.....	30.10	30.38	7	29.60	30	10	42	nw.	30			
Long Branch.....	30.07	30.40	18	29.45	30	17	84	ne.	24	79	76	62
Newark.....	30.30	30.30	18	29.50	30		40	ne.	24	69*	68†	61
New York, N. Y.....	30.05	30.39	18	29.44	30	18	62	s.	30	75	58	58
Wissades Park.....	30.02	30.36	18	29.40	30							
Philadelphia, Pa.....	30.09	30.39	17	29.42	30	11	38	ne.	24	74	68	62
Andy Hook.....	30.05	30.39	18	29.39	30	18	68	se.	24	81	76	72
Wenton.....	30.05	30.37	18	29.41	30	12	48	ne.	24	81	74	68

§ Two directions and dates

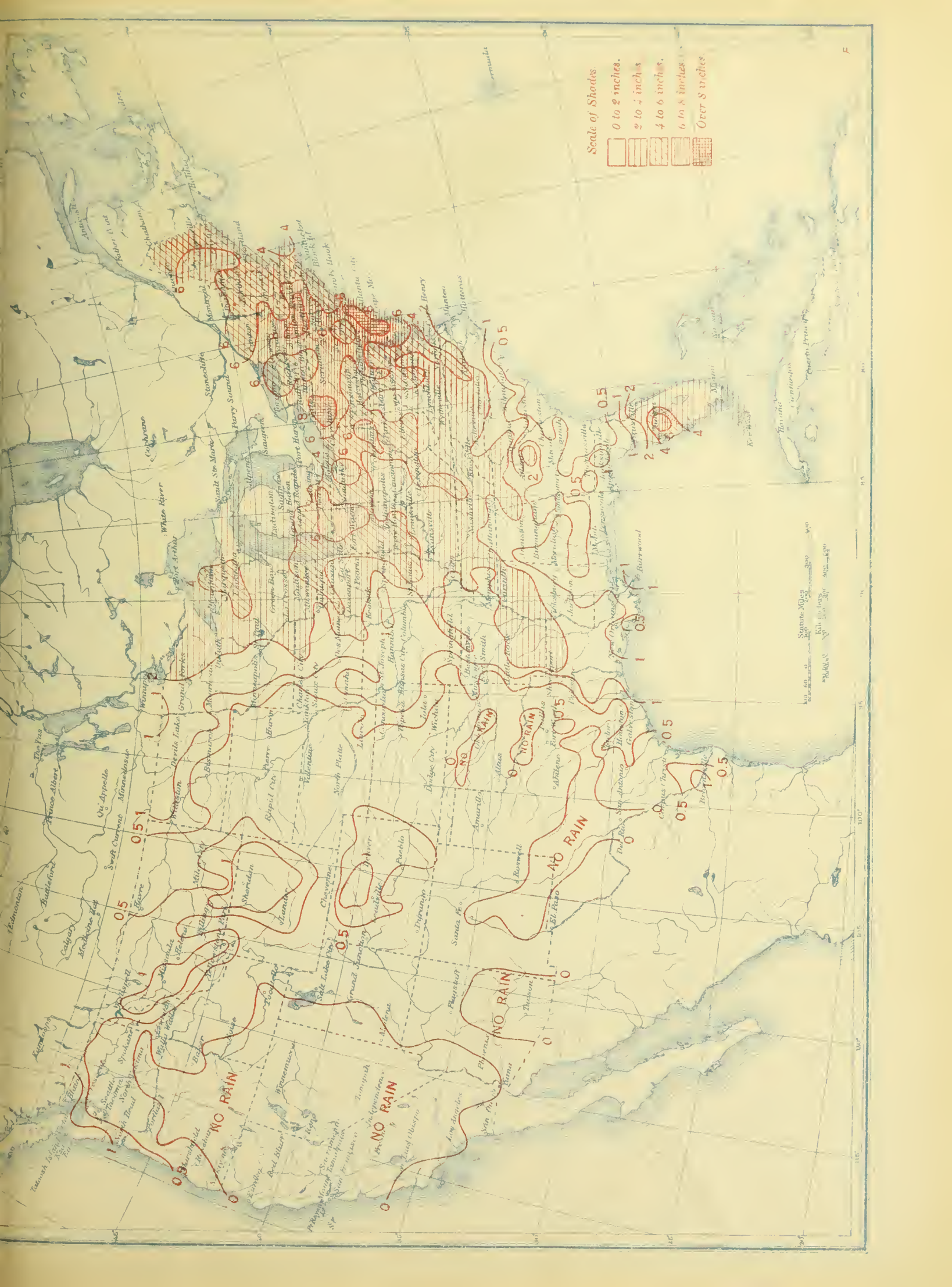
* 7 a. m.

† 9 p. m.

‡ 5 p. m.

Daily temperatures for October, 1917.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean		
<i>The Highlands and Kittatinny Valley</i>																																		
Belvidere.....	Maximum	69	76	71	71			62		60	62	60	58	64	64	72	64	60	75	69	57	60	59	53	51	62	72	63	53	68		63.7 ^a		
	Minimum	43	35	36	49	44	42	30	37	34	39	39	42	29	30	43	49	32	35	54	39	27	27	29	40	38	29	40	43	31	36	25	37.0	
Charlotteburg.....	Maximum	65	67	67	69	65	62	59		50	53		56	55	60	66	64	64	55	70	67	47	52	52	50	51	55	69	61	55	63	44	59.1	
	Minimum	44	35	30	46	34	42	31	29	32	37	36	40	28	25	43	46	27	35	51	37	22	23	23	40	37	26	42	43	24	33	25	34.4	
Dover.....	Maximum	61	66		69	69	59	58	64	45			60	54	60	64	66	60	58	71	55	53	58	55	52	49	57	69	57	61	65	44	59.2	
	Minimum	44	37	36	42	40	39	31	34	38	38		33	30	29	44	43	31	40	50	31	26	27	27	40	38	29	43	35	29	32	25	35.3	
Layton.....	Maximum	59	68	64	69	63	57	59	58	47	55	59	58	55	56	66	66	63	60	69	68	55	60	58	50	50	59	69	67	55	67	45	59.6	
	Minimum	42	32	32	52	39	44	25	32	35	34	38	41	24	26	45	49	26	38	52	39	23	26	25	39	38	29	38	41	28	36	24	35.3	
Newton.....	Maximum	57	63	66	66	70	59	55	60	60	52	54	58	53	59	62	66	58	58	72	60	49	56	52	48	49	56	67	65	60	60	45	58.5	
	Minimum	43	37	38	48	45	45	31	38	40	37	37	42	29	30	44	51	33	41	55	37	30	27	30	38	38	31	41	38	29	33	26	37.5	
Phillipsburg.....	Maximum	59	66	71	70	71	62	61	65	55	58	59	60	55	63	65	69	61	59	73	70	54	59	57	54	49	60	70	62	55	67	43	61.4	
	Minimum	44	38	36	49	43	44	32	38	40	39	41	42	31	32	46	50	37	43	54	40	29	30	30	40	39	31	44	44	33	35	27	38.7	
Sussex.....	Maximum																																	
	Minimum																																	
<i>The Red Sandstone Plain.</i>																																		
Bergen Point.....	Maximum	64	64	65	73	75	62	60	68	54	54	58	65		65	70	69	57				56			58	59	52	58	68	62	62	68	47	62.0 ^a
	Minimum	49	41	41	45	40	46	36		39			39	32	36	45	49	37				42			39	37	41	42	35	40	40	40	30	40.0 ^a
Boonton§§.....	Maximum	61	62	68	71	74	62	58	64	47	58	59	63	56	61	66	68	63	61	74	58	56	60	59	55	51	59	73	58	69	65	45	61.4	
	Minimum	39	34	35	41	38	49	28	32	42	39	40	42	26	29	36	45	33	39	48	40	24	29	22	36	40	30	35	41	28	34	29	35.9	
Elizabeth.....	Maximum	67	68	71	75	78	66	63	70	57	59	62	64	58	65	71	72	62	61	76	61	64	58	63	61	58	53	62	71	63	60	69	48	64.4
	Minimum	42	36	40	44	42	49	32	35	40	39	43	44	30	33	40	46	34	39	47	40	27	30	30	44	39	31	43	42	32	40	27	38.1	
Flemington.....	Maximum	63	69	72	75	76	67	62	68	63	56	63	64	59	64	70	73	65	61	78	71	56	63	57	56	52	65	73	63	60	68	45	64.4	
	Minimum	44	38	35	43	43	47	32	35	32	41	44	44	30	35	43	48	34	44	48	42	32	32	32	42	40	30	44	45	32	37	28	38.9	
Highwood.....	Maximum	61	63	66	71	69	60	57	64	52	53	54	62	55	61	68	67	59	59	71	65	52	60	57	55	53	57	66	61	58	65	45	60.2	
	Minimum	41	35	34	44	40	46	32	36	41	40	42	42	32	31	43	45	31	40	52	36	26	28	28	43	41	32	44	39	30	38	28	37.4	
Jersey City.....	Maximum	65	65	68	74	74	63	60	66	54	56	56	62	56	62	69	70	58	60	72	62	54	61	54	54	54	56	65	59	57	65	45	61.2	
	Minimum	47	44	46	52	53	52	40	43	42	42	45	48	35	41	49	53	43	50	56	41	35	37	39	46	41	40	50	48	40	39	31	44.1	
Lambertville.....	Maximum	60	65	69	69	74	66	59	66	64	55	57	62	54	61	67	67	63	60	72	68	53	57	59	55	53	61	68	66	58	62	44	61.7	
	Minimum	48	41	41	50	46	48	36	41	43	42	44	47	33	37	46	49	39	45	49	44	33	35	34	46	42	33	46	46	35	37	30	41.5	
Little Falls.....	Maximum	62	66	67	71	71	62	59	68	50	57	57	62	55	60	67	67	64	62	72			59	57	54	52	59		61	63	68	47	61.4 ^a	
	Minimum	45	39	39	45	42			42				40		32	45	44		51	52	34	28	32	30	43	39	34	42	35	32	30	29	38.8 ^a	
	Maximum	62	65	65	70	72	65	63	68	53	61	56	59	54	58	66	64	59	56	69	56	58	57	54	53				64		60		61.0 ^a	
	Minimum	50	48	48	52	51	50	48	50			46	43		45	48	42	48	52				42	42	40	51					31	46.4 ^k		
New Brunswick.....	Maximum	62	66	69	73	77	65	59	67	59	54	58	63	54	62	69	68	60	60	74	73	60	58	55	58	52	60	71	66	60	69	45	62.8	
	Minimum	46	39	39	47	46	48	34	37	41	40	43	45	32	35	41	49	38	42	49	32	42	34	33	42	41	32	44	47	38	36	28	39.9	
Palisades Park.....	Maximum	63	67	67	73	72	62	60	66	46	55	55	62	57	62	69	70	62	59	70	55	54	61	57	55	51	60	66	60	58	66	46	60.8	
	Minimum	40	35	35	43	42	37	32	37	40	40	41	36	31	31	43	42	31	44	51	31	29	29	29	43	41	32	46	36	31	33	28	36.7	
Paterson.....	Maximum	72	69	70	75	74	66	63	65	58	58	60	62	60	65	73	64	60	74	64	57	64	60	54	56	61	69	61	58	68	48	63.8		
	Minimum	49	42	35	47	44	49	37	38	44	40	42	43	32	36	44	50	38	45	50	42	31	35	34	43	41	38	45	44	33	42	29	40.8	
Plainfield.....	Maximum																																	
	Minimum																																	
Somerville.....	Maximum	62	69	71	73	76	66	61	69	59	59	61	66	55	62	69	70	64	61	77	69	56	60	58	57	52	61	70	61	58	68	46	63.4	
	Minimum	43	32	35	40	39	46	29	33	40	40	41	35	29	31	38	45	30	40	49	40	28	29	26	41	40	27	40	45	28	36	25	36.1	
	Maximum	67	65	65	69	70	59	57	63	50	53	55	63	54	60	66	65	57	59	72	53	51	57	55	57	50	57	64	60	59	68	43	59.5	
South Orange.....	Maximum	45	41	39	48	45	44	36	38	40	40	42	41	31	35	42	49	37	43	50	36	32	36	34	43	41	36	45	39	35	35	29	39.6	
	Minimum	61	62	63	70	74	60	57	63	50	55	55	59	54	59	67	67	58	57	66	53	52	59	54	57	52	56	66	60	61	65	46	59.3	
New York, N. Y.....	Maximum	47	45	49	53	54	46	41	48																									



Scale of Shades:



0 to 2 inches.

2 to 4 inches.

4 to 6 inches.

6 to 8 inches.

Over 8 inches.

Scale of Miles
0 10 20 30 40 50
Scale of Feet
0 100 200 300 400 500

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U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU

CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

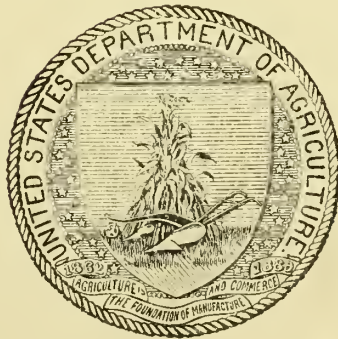
NEW JERSEY SECTION

NOVEMBER, 1917.

BY

G. HAROLD NOYES

METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
DECEMBER 17, 1917.

Departure of the Mean Temperature from the Normal, November, 1917.



Shaded portions show excess (+).
Unshaded portions show deficiency (-).
Lines show amount of excess or deficiency.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

VOL. XXX. TRENTON, N. J., NOVEMBER, 1917. No. 11.

GENERAL SUMMARY.

The copious rains of October terminated abruptly on the 30th of that month, and no more rain fell in New Jersey until the 20th of November. This period was also one of continuously clear skies, with but very little cloudiness observed, and the number of clear days for the month, averaging the whole State, broke all records. At several stations records were broken for both lack of total precipitation, and low average temperature. While November, 1901, was a little lower than November, 1917, in temperature, it did not occur consecutively with other notably cold Autumn months as was the case this year. Indeed, from the commencement of 1917, there have been but three months above normal in warmth, viz., January, July and August. This low temperature, absence of rain, and much wind have been contributing factors favorable for forest fire conditions, and the State Firewarden reports as follows:

"During November, New Jersey has experienced unusually severe forest fire conditions. The ground surface in the woods has been exceptionally dry, the leaf cover has been unusually heavy and high winds seem to have been very prevalent. Because of these conditions and coincident with the opening of the season for small game hunting, fires began to break out in great numbers in all parts of the State. Many of them were very hard to control because of the wind and drought, and more than usual reached a size which entitles them to notice as large forest fires." It has been such a universal experience of all Foresters that fires result from careless use of matches or failure to extinguish the remains of camp fires, that the open season for hunting wood game might well be contingent upon the occurrence of a reasonably rainy period of weather.

Light rain fell on the 22d, 23d, and 28th; the heaviest rain of the month began on the 30th, and continued on into December, so that monthly totals ending at twilight on the last afternoon of the month are very low records, while records that continue to midnight are appreciably greater.

The mean stage of the Delaware River at Phillipsburg was 3.1 feet. At Trenton the mean daily stage was 2.1 feet, which was 0.4 foot above normal; the highest stage was 8.5 feet on the 1st.

The temperature departure from normal for the year 1917 to date, by sections, is: The Highlands, -1.4° ; Red Sandstone Plain, -1.3° ; Southern Interior, -1.3° ; The Seacoast, -1.6° . The precipitation accumulated departure from the normal for the year 1917 to date, by sections, is: The Highlands, -8.75 ; Red Sandstone Plain, -9.53 ; Southern Interior, -2.50 ; The Seacoast, -2.67 .

Storm warnings were displayed on the coast on the 18th, 22d, and 23d.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from

observations of 36 stations, was 39.6° , which was 3.1° below normal. The highest temperature was 68° at Tuckerton and Bridgeton on the 10th and 16th, respectively, and the lowest, 2° , at Culvers Lake on the 26th. The greatest daily range of temperature was 46° at Belvidere on the 14th. The deficiency in temperature ranged from slightly less than 2° to nearly 5° per station.

PRECIPITATION.

The average total precipitation of the State, as deduced from observations of 42 stations, was 0.56 inch, which was 2.87 inches below normal. The average snowfall was 0.7 inch, which was 1.0 inch less than normal. The greatest monthly amount was 1.15 inches at Atlantic City, and the least, 0.18 inch at Lakewood. The greatest precipitation in any 24 consecutive hours was 1.20 inches at Sandy Hook on November 30-December 1. The principal date of snowfall was the 28th. The average number of days on which 0.01 inch or more precipitation occurred was 3, which was 5 below normal.

WIND.

The prevailing wind direction was from the northwest, with an approximate velocity of 12 miles per hour, or the same as last November. The highest velocity, sustained for 5 consecutive minutes, was 49 miles per hour from the northwest on the 6th at Sandy Hook.

SUNSHINE AND CLOUDINESS.

The average number of clear days throughout the State was 19, which was 7 more than normal; partly cloudy, 5, which was 4 below normal; cloudy, 6, which was 3 below normal. The approximate percent. of possible sunshine was 74, which was much above normal.

COMPARATIVE DATA FOR NOVEMBER.

Year.	Temperature.			Precipitation.			No. of days.			.01 inch or more prec.
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	
1885.....	44.8	76	18	4.53	7.90	2.72	.....	.....	.....	.....
1886.....	44.5	73	17	4.49	6.24	3.45	.....	.....	.....	.....
1887.....	41.5	72	13	1.94	2.60	0.95	.....	.....	.....	6
1888.....	45.8	77	8	3.97	5.41	2.66	.....	.....	.....	13
1889.....	45.7	69	13	8.48	11.45	4.70	.....	.....	.....	13
1890.....	43.8	74	11	0.82	<i>1.10</i>	0.38	13	12	5	8
1891.....	42.2	70	6	2.39	3.47	1.54	12	10	8	4
1892.....	41.9	71	12	7.29	9.49	4.74	8	9	13	11
1893.....	41.8	70	11	3.48	4.53	2.19	10	11	9	7
1894.....	40.3	76	11	3.34	5.12	1.77	13	7	10	10
1895.....	45.7	80	12	3.17	5.10	1.56	12	7	11	10
1896.....	48.2	78	12	3.05	5.68	1.37	9	9	12	8
1897.....	43.8	74	10	4.59	5.95	2.42	8	11	11	12
1898.....	42.4	70	11	6.76	9.07	3.83	10	9	11	14
1899.....	44.0	71	17	2.29	4.32	0.72	15	8	7	7
1900.....	47.5	79	15	3.43	5.54	1.82	9	10	11	9
1901.....	38.5	69	10	2.38	4.23	1.18	12	9	9	6
1902.....	49.3	89	20	2.20	4.17	0.87	10	11	9	8
1903.....	39.9	79	3	1.26	2.03	0.75	16	8	6	6
1904.....	40.2	69	6	2.18	3.40	1.30	12	10	8	6
1905.....	42.1	70	6	1.84	2.86	0.54	12	10	8	6
1906.....	43.6	70	8	1.61	2.52	1.66	16	7	7	6
1907.....	43.5	<i>68</i>	13	5.65	6.95	4.19	10	8	12	13
1908.....	43.1	72	<i>2</i>	0.96	1.29	0.35	14	8	8	4
1909.....	46.4	80	17	2.36	4.33	1.32	13	8	9	8
1910.....	40.4	71	12	3.79	5.73	1.63	5	13	12	9
1911.....	41.3	73	13	5.17	6.50	3.17	8	11	11	10
1912.....	45.3	76	11	3.43	8.12	2.02	15	8	7	6
1913.....	46.2	77	19	2.71	4.89	1.00	14	7	9	7
1914.....	43.3	80	6	2.60	1.81	1.21	16	8	6	6
1915.....	41.0	75	16	1.69	3.11	0.96	14	8	8	8
1916.....	43.3	75	11	2.11	3.81	0.80	16	5	9	8
1917.....	39.8	<i>68</i>	<i>2</i>	<i>0.56</i>	1.15	<i>0.18</i>	19	5	6	3

Climatological data for November, 1917.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation 60 in. or more.	Clear.	Pt. cloudy.			Cloudy.
The Highlands and Kittatinny Valley.																				
Belydere.....	Warren.....	289	26	39.4	-1.8	66	10	66	27†	46	0.83	-2.66	0.46	0.5	5	19	2	9	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	25	36.4	-4.1	65	6	13	27	37	0.93	-2.80	.....	1.2	5	21	6	3	w.	George S. Briggs.
Culvers Lake††.....	Sussex.....	848	16	.....	.....	.....	.....	.....	2	26	0.71	-2.11	0.40	0.5	5	19	4	7	n.	Brice E. Riker.
Dover.....	Morris.....	600	33	37.0	-3.3	63	6	15	27	32	0.65	-2.98	0.40	0.5	4	4	19	7	.....	William C. Harris.
Layton.....	Sussex.....	480	17	37.0	-1.4	66	18	14	26†	44	0.92	-2.16	0.41	0.5	4	18	2	10	n.	A. M. Depue.
Newton.....	Sussex.....	769	36	37.4	-2.4	63	6	9	25	30	0.93	-2.01	0.55	0.2	4	24	5	1	nw.	Irving G. Kern.
Phillipsburg.....	Warren.....	363	35	39.6	-2.0	65	6	17	27	37	0.80	-2.48	0.41	1.0	6	21	2	7	nw.	D. Wilson Smith.
Sussex.....	Sussex.....	442	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. W. Tittsworth.
Means and extremes.....				37.8	-2.5	66	10†	2	26	46	0.82	-2.46	0.55	0.6	5	18	6	6	nw.	
The Red Sandstone Plain.																				
Bergen Point††*.....	Hudson.....	37	20	39.6*	-3.4	66	18	18	27	34	.....	.....	.....	T.	12	13	5	nw.	William H. Mitchell.	
Boonton.....	Morris.....	400	27	37.5	.....	65	18	15	27	43	0.59	-3.08	0.27	0.3	4	26	0	4	nw.	J. W. Demmers.
Chatham.....	Morris.....	330	15	.....	.....	.....	.....	.....	.....	.....	0.54	-2.95	0.29	0.5	5	22	5	3	.....	Paul Molitor.
Elizabeth.....	Union.....	45	38	40.1	-3.5	66	15	16	27	38	0.56	-2.78	0.49	0.5	4	19	5	6	nw.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	29	41.0	-1.8	66	6†	17	27	40	0.83	-2.52	0.53	0.8	5	24	0	6	nw.	Hiram E. Deats.
Highwood.....	Bergen.....	90	28	37.6	-4.7	64	6	15	27	42	0.60	-3.03	0.50	0.3	4	17	6	7	nw.	Charles J. Bates.
Jersey City.....	Hudson.....	10	18	41.4	-2.2	62	10†	19	27	25	0.74	-2.66	0.43	0.3	5	18	5	7	nw.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Samuel W. Cochran.
Little Falls.....	Passaic.....	180	14	38.3	.....	62	6†	16	25†	34	0.79	-2.73	0.60	0.4	4	19	3	8	w.	Montclair Water Co.
Newark.....	Essex.....	159	75	40.0	-2.9	62	15†	18	27	26	1.13	-2.37	0.66	0.2	4	22	1	7	nw.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	110	64	40.4	-3.2	64	18	17	27	37	0.54	-3.05	0.47	0.5	3	23	3	4	nw.	N. J. Experiment Station.
Palisades Park.....	Bergen.....	80	2	38.2	.....	65	6	17	27	38	0.66	.....	0.57	0.4	3	16	8	6	nw.	George P. Kirsten.
Paterson.....	Passaic.....	80	46	41.4	-1.9	67	6†	18	27	37	0.58	-2.68	0.52	0.5	3	6	4	20	nw.	Marion T. Probert.
Plainfield.....	Union.....	100	31	.....	.....	.....	.....	.....	.....	.....	0.40	-3.19	.....	0.5	.....	.....	.....	.....	.....	John Neagle.
Pompton Plains.....	Morris.....	195	15	.....	.....	.....	.....	.....	.....	.....	0.59	-2.90	0.32	T.	3	.....	.....	.....	.....	M. S. Taylor.
Somerville.....	Somerset.....	60	35	38.5	-3.7	65	6	11	28	42	0.61	-2.78	0.44	0.5	5	17	8	5	nw.	A. A. Macdonald.
South Orange.....	Essex.....	200	47	39.2	-2.4	62	18	18	27	30	0.75	-2.62	0.70	0.2	2	17	8	5	w.	Dr. W. J. Chandler.
New York, N. Y.....	.....	365	47	41.2	-2.8	63	15	18	27	23	0.68	-2.76	1.24	0.3	4	16	7	7	nw.	U. S. Weather Bureau.
Means and extremes.....				39.5	-3.0	67	6†	11	28	43	0.66	-2.81	0.70	0.4	4	18	5	7	nw.	
The Southern Interior.																				
Bridgeport.....	Cumberland.....	30	36	41.4	-3.5	68	10	16	27	36	0.31	-2.95	0.15	1.5	4	20	3	7	nw.	Henry A. Jorden.
Burlington.....	Burlington.....	12	31	41.0	-3.0	65	10†	19	27	35	0.33	-3.41	0.23	1.0	3	23	1	6	nw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	25	41.2	-2.2	66	18	21	25†	36	0.24	-3.29	0.20	2.0	3	20	4	6	nw.	W. Rex B. Sitch.
Hammonton.....	Atlantic.....	103	15	.....	.....	.....	.....	.....	.....	.....	0.28	-3.44	0.19	2.6	2	25	3	2	nw.	G. H. Parkhurst.
Hightstown.....	Mercer.....	120	25	38.5†	-5.1	62	6†	17	27	35	0.41	-3.25	0.33	.....	3	.....	.....	.....	.....	G. Franklin Eldridge.
Imlaystown††.....	Monmouth.....	185	29	39.6*	-4.7	63*	15	16	26†	40	0.23	-3.43	0.23	T.	1	.....	.....	.....	.....	F. B. Jones.
Indian Mills.....	Burlington.....	76	28	39.8	-3.6	67	18	10	27	41	0.32	-3.28	0.21	2.0	2	20	5	5	nw.	James M. Armstrong.
Lakewood.....	Ocean.....	54	14	38.6	-4.6	64	18	16	26†	36	0.18	-3.47	0.13	0.7	2	13	8	9	nw.	R. W. Holman.
Moorestown.....	Burlington.....	75	55	41.3	-1.7	65	6†	15	27	38	0.32	-3.10	0.17	0.2	2	18	5	7	nw.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	10	.....	.....	.....	.....	.....	.....	.....	0.20	.....	0.12	1.2	2	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	19	.....	.....	.....	.....	.....	.....	.....	0.19	-3.17	0.10	.....	3	21	3	6	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	46	40.6	-3.8	65	18	19	27	28	1.02	-2.41	0.92	0.3	4	17	6	7	nw.	U. S. Weather Bureau.
Thicketon.....	Ocean.....	23	24	40.4	-3.6	68	18	10	27	39	0.50	-2.96	0.22	2.0	3	20	5	5	nw.	Frank R. Austin.
Vineland.....	Cumberland.....	109	49	42.0*	-1.9	67	10†	19	26†	34	0.25	-3.05	0.15	1.0	2	23	3	4	nw.	H. C. Himes.
Woodbine.....	Cape May.....	43	26	40.9	-3.1	64	10†	12	27	32	0.31	-2.84	0.16	1.4	2	19	7	4	w.	Baron de Hirsch Agr. Sch.
Philadelphia, Pa.....	.....	117	47	43.4	-1.5	65	6	23	27	25	0.86	-2.20	0.50	2.0	4	17	7	6	nw.	U. S. Weather Bureau.
Means and extremes.....				40.4	-3.4	68	10†	10	27	41	0.34	-3.15	0.92	1.2	3	20	4	6	nw.	
The Sea Coast.																				
Asbury Park.....	Monmouth.....	22	28	41.2	-3.0	62	6†	19	25†	29	0.31	-2.96	0.18	0.2	3	24	2	4	w.	Wilbur H. Pancoast.
Atlantic City.....	Atlantic.....	16	44	41.8	-3.7	65	18	18	27	29	1.15	-2.08	0.98	0.3	4	17	8	5	nw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	33	43.2	-4.2	64	10	21	27	22	0.30	-2.92	0.18	1.0	3	15	7	8	n.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	10	38.8	.....	64	18	17	27	28	0.47	.....	0.24	0.1	3	17	8	5	nw.	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	19	41.8	-2.7	59	18	21	27	19	0.47	-3.29	1.20	0.2	3	17	6	7	nw.	U. S. Weather Bureau.
Means and extremes.....				41.4	-3.4	65	18	17	27	29	0.54	-2.81	1.20	0.4	3	18	6	6	nw.	
For the State.....				39.8	-3.1	68	10†	2	26	46	0.56	-2.87	1.20	0.7	3	19	5	6	nw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

* Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Imlaystown is Cream Ridge.

Daily precipitation for November, 1917.

Stations.	Watershed.	Day of month.																															Total.
		1	2	3	4	5	6	7.	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
<i>The Highlands and Kittatinny Valley.</i>																																	
Belvidere.....	Delaware.....																				*	.05	.46	.27					.04	.01		0.93	
Charlotteburg.....	Passaic.....																					.20	*	.61					.12	*		0.93	
Culvers Lake.....	Delaware.....																					.13	.40	.12	T.				.04	.02		0.71	
Dover.....	Passaic.....																					.20	.40						.05	*		0.65	
Layton.....	Delaware.....																					.18	.41	.26	T.				.07	T.		0.92	
Newton.....	Delaware.....																																
Phillipsburg.....	do.....																					.03	.18	.41	.10				.09	.20		0.93	
Sussex.....	Hudson.....																												.04	.04		0.80	
<i>The Red Sandstone Plain.</i>																																	
Bergen Point.....	Coast.....																				T	T							.09	T	T.	\$	
Boonton III.....	Passaic.....																				T	.07	.27	.24					.01	T		0.59	
Chatham III.....	do.....																					.01	.05	.29	.15				.04			0.54	
Elizabeth.....	Coast.....																				T	.03	*	.49					.04	*		0.56	
Flemington.....	Raritan.....																				T	.08	.53	.06					.08	.08		0.82	
Highwood.....	Hackensack.....																				T	.06	.50	.01					.03	T.		0.60	
Jersey City.....	Coast.....																				T	.02	.43	.01					.03	.25		0.74	
Lambertville.....	Delaware.....																																
Little Falls**.....	Passaic.....																				T	.10	.50						.04	.15		0.79	
Newark**.....	Coast.....																				T	.04	.66						.02	.41		1.15	
New Brunswick.....	Raritan.....																				T	.05	.47						.05	.02		0.54	
Palisades Park.....	Hackensack.....																				T	.04	.57	T.					.04	T.		0.66	
Paterson.....	Passaic.....																				T	.04	.52						.02	T.		0.58	
Plainfield**.....	Raritan.....																																
Pompton Plains||	Passaic.....																				T	.06	.21	.32					T.			10.40	
Somerville.....	Raritan.....																					.03	.44	.03					.06			0.59	
South Orange.....	Rahway.....																				T	.70							.05	T.		0.61	
New York, N. Y***	Coast.....																				T	T	.36	.03				T	.03	.26		0.68	
<i>The Southern Interior.</i>																																	
Bridgeton.....	Coast.....																						.10	.06					.15	*		0.31	
Burlington.....	Delaware.....																						.23					.10	*		0.33		
Clayton.....	Maurice.....																																
Hammonton.....	Mullica.....																						.09					.19				0.28	
Hightstown.....	Raritan.....																						.33						.06	.02		0.41	
Imlaystown.....	Delaware.....																																
Indian Mills.....	Mullica.....																						.23					T.		T.		0.23	
Lakewood.....	Metedeconk.....																						.11					.21		T.		0.32	
Moorestown.....	Delaware.....																						.13					.05		T.		0.18	
Northfield.....	Coast.....																						.17					.15				0.32	
Pleasantville.....	Coast.....																						.08					.12				0.20	
Trouton***.....	Delaware.....																						.08					.10		.01		0.19	
Tuckerton.....	Coast.....																				T	T	.31		T	T.		.01	.03	.67		1.02	
Vineland.....	Maurice.....																						.10					.22	.18			0.50	
Woodbine.....	Coast.....																						T.					.10	.15			0.25	
Philadelphia, Pa.	Delaware.....																						.15					.16				0.31	
<i>The Sea Coast.</i>																																	
Asbury Park.....	Coast.....																						.18						.02		.11		0.31
Atlantic City***.....	do.....																				T	T	.11					.01	.14	.89		1.15	
Cape May City.....	do.....																				T	.06					T.		.18	.06		0.30	
Long Branch**.....	do.....																						.22					.01	.24			0.47	
Sandy Hook***.....	do.....																				T	T	.22					.02	.23			0.45	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded.

|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.

* Precipitation included in the next following measurement. ** Precipitation for 24-hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

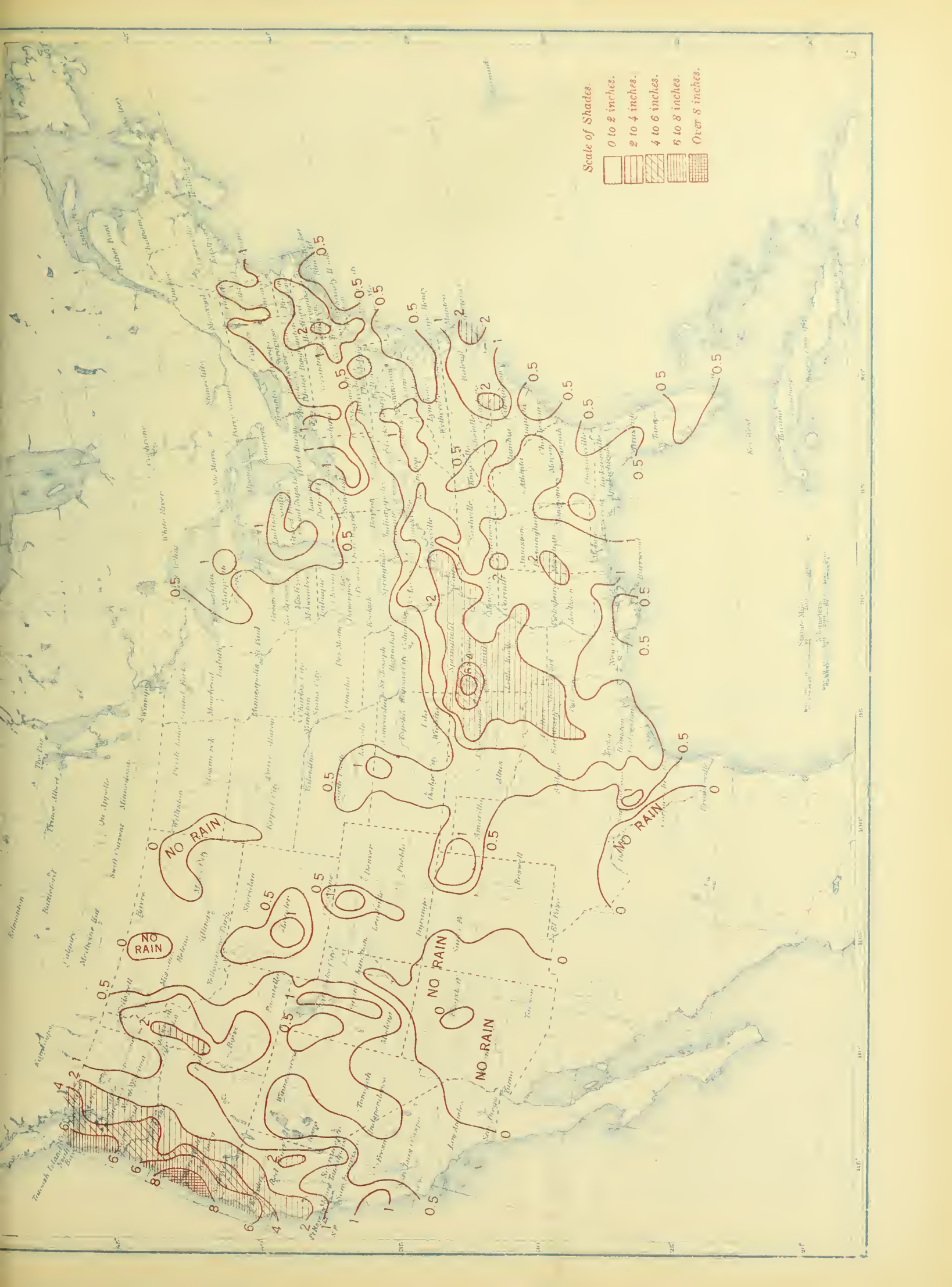
Stations.	Monthly mean.	Pressure.				Wind.			Moisture.		Sun- shine	
		Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.		Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.		
							Miles per hour.	Direction.				Date.
Atlantic City.....	30.12	30.67	27	29.36	22	7	19	n.	7	73	72	
Cape May City.....	30.14	30.70	27	29.46	22	8	28	nw.	26	75	74	
Long Branch.....	30.09	30.65	27	29.38	22	15	40	nw.	6	66	79	
Newark.....	30.08	30.64	27	29.39	22	17	36	nw.	25	67*	56†	
New York, N. Y.....	30.08	30.64	27	29.39	22	17	56	sw.	18	67	72	
Palisades Park.....	30.05	30.56	27	29.38	22	9	31	n.	6	66	64	
Philadelphia, Pa.....	30.13	30.67	27	29.34	22	9	31	n.	6	66	64	
Sandy Hook.....	30.08	30.65	27	29.38	22	17	49	nw.	6	76	73	
Trenton.....	30.10	30.64	27	29.36	22	10	31	nw.	26	72	63	

§ Two directions and dates

* 7 a. m. † 9 p. m.

Daily temperatures for November, 1917.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.
<i>The Highlands and Kittatinny Valley</i>																																
Belvidere.....	Maximum	49	50	49	53	57	60	47	57	60	66	61	62	52	64	63	51	51	61	55	46	45	55	53	41	39	32	34	35	48	42	51.3
	Minimum	23	24	28	29	21	22	30	25	35	34	27	32	25	18	25	39	35	27	30	24	35	40	34	37	17	16	16	24	23	26	27.4
Charlotteburg.....	Maximum	43	41	45	46	50	65	42	49	53	56	60	59	43	57	61	50	44	60	58	43	42	45	46	44	29	26	32	33	40	36	46.6
	Minimum	21	28	30	26	23	32	29	28	35	35	23	29	23	21	32	32	33	29	26	18	34	36	33	27	17	16	13	22	27	17	26.2
Dover.....	Maximum	47	46	46	47	55	63	45	51	54	59	58	55	46	59	61	44	48	61	42	43	40	46	45	35	27	29	30	34	45	38	46.6
	Minimum	21	28	25	25	24	34	30	28	36	34	27	35	23	27	32	35	33	36	24	24	36	38	33	24	16	16	15	22	23	21	27.5
Layton.....	Maximum	46	48	46	48	60	55	51	52	53	59	59	51	49	62	64	42	49	66	59	43	43	48	47	46	36	35	33	35	47	40	49.1
	Minimum	21	22	26	22	18	21	30	23	34	27	23	25	17	18	21	37	35	22	28	20	34	38	33	33	17	14	14	26	20	32	25.0
Newton.....	Maximum	45	47	48	50	53	63	50	50	52	55	60	55	44	58	60	45	48	60	57	51	43	47	45	39	30	28	29	36	43	37	47.6
	Minimum	38	25	28	24	29	34	21	25	31	30	30	37	23	29	32	33	33	34	27	26	23	36	35	26	9	10	14	21	25	26	27.3 ^a
Phillipsburg.....	Maximum	48	49	46	49	55	65	59	53	57	63	58	58	47	60	61	52	52	62	57	48	46	49	49	41	32	29	30	35	45	41	49.9
	Minimum	25	27	30	29	24	28	34	26	39	38	30	34	27	24	28	38	36	32	31	27	36	40	35	29	18	20	17	24	25	29	29.3
Sussex.....	Maximum																															
	Minimum																															
<i>The Red Sandstone Plain.</i>																																
Bergen Point.....	Maximum	48	50	48	48	54	47	54	58	63	58	61	47	58	64	48	56	66	46	49	44	58	55	43	31	32	31	36	46	46	49.8 ^a	
	Minimum	27	28	28	30	31	38	29	31	36	31	38	30	27	30	30	35	28	27	39	38	36	20	21	19	18	25	26	31	43	49.1	
Boonton§§.....	Maximum	47	48	48	49	58	64	47	54	57	60	58	57	50	63	63	46	50	65	41	45	45	48	51	37	31	31	32	36	49	49.1	
	Minimum	21	22	22	26	22	31	32	30	36	30	24	28	26	20	25	30	33	24	30	20	27	37	34	29	19	15	17	26	22	23	25.9
Elizabeth.....	Maximum	50	52	50	52	56	64	58	56	59	64	59	63	51	59	66	53	55	64	56	49	47	51	57	45	32	34	33	35	48	43	51.9
	Minimum	23	26	25	27	23	32	27	38	33	27	34	28	25	29	39	26	32	33	24	38	40	40	27	19	17	16	25	26	28	23	28.3
Flemington.....	Maximum	48	50	50	51	60	66	57	55	61	66	60	61	52	65	65	55	54	65	57	48	44	50	54	46	33	33	33	36	50	43	52.3
	Minimum	24	29	29	28	26	29	31	30	37	35	29	32	29	25	29	41	33	30	33	25	38	40	37	30	20	21	17	26	28	24	29.6
Highwood.....	Maximum	46	47	48	45	51	64	49	52	57	60	56	58	44	56	62	45	52	63	53	46	44	48	53	43	31	32	30	35	44	41	48.5
	Minimum	24	23	24	25	22	31	25	40	34	26	32	24	20	25	36	24	29	26	21	37	39	33	29	20	18	15	26	23	25	26.7	
Jersey City.....	Maximum	46	49	49	47	52	61	53	52	56	62	55	61	47	53	61	47	58	62	55	47	48	51	53	46	30	33	32	36	46	43	49.7
	Minimum	31	33	33	33	30	38	34	31	36	40	37	41	31	32	36	37	33	37	33	32	37	43	44	30	22	21	19	28	31	33	33.2
Lambertville.....	Maximum																															
	Minimum																															
Little Falls.....	Maximum	47	48	49	48	52	62	46	52	58	60	57	56	46	56	60	47	52	62	42	46	44	49	54	39	30	31	30	37	44	42	48.2
	Minimum	25	26	24	27	27	28	32	29	38	37	29	33	26	33	27	35	32	30	25	22	38	40	37	28	16	16	16	26	26	25	28.4
Newark.....	Maximum	45	46	46	46	52	57	44	49	54	59	54	59	50	58	62	44	52	62	38	45	41	46	52	36	30	31	29	33	43	43	46.9
	Minimum	33	34	35	34	34	37	30	33	40	40	37	40	31	32	37	36	36	38	32	32	37	39	42	31	21	20	18	30	25	32	33.2
New Brunswick.....	Maximum	50	48	46	47	53	61	62	55	58	58	62	61	49	59	60	54	51	64	58	48	44	48	53	46	32	31	30	35	46	45	50.5
	Minimum	25	28	30	28	28	33	25	29	38	31	34	36	31	28	34	42	30	35	32	25	38	37	39	30	20	19	17	25	27	32	30.2
Palisades Park.....	Maximum	47	49	47	47	52	65	47	53	57	61	57	58	46	59	63	44	52	63	42	45	41	48	53	39	31	32	31	35	46	41	48.4
	Minimum	23	26	26	25	24	27	31	25	37	36	27	36	27	23	27	32	26	34	23	24	37	41	39	28	21	18	17	26	25	27	27.9
Paterson.....	Maximum	48	51	49	51	56	67	59	55	60	62	60	61	49	60	67	52	54	65	59	46	45	48	55	44	33	34	32	37	48	44	51.7
	Minimum	27	29	29	28	29	31	33	31	40	38	32	37	30	28	30	40	35	33	33	26	38	40	40	31	22	20	18	25	29	27	31.0
Plainfield.....	Maximum																															
	Minimum																															
Somerville.....	Maximum	49	50	49	50	58	65	58	57	58	62	64	60	49	61	61	49	53	64	58	48	44	49	53	45	32	33	33	35	49	46	51.4
	Minimum	20	24	22	25	20	23	26	28	35	28	24	28	20	26	39	25	24	30	20	36	39	34	29	20	18	11	24	24	20	25.6	
South Orange.....	Maximum	46	46	47	46	51	61	48	51	55	59	55	58	45	55	61	45	50	62	49	46	43	48	51	36	28	30	30	36	44	42	47.5
	Minimum	27	28	31	31	31	33	33	31	39	36	32	38	32	28	33	36	32	32	29	27	39	41	36	28	20	18	26	30	29	30.9	
New York, N. Y.....	Maximum	47	48	47	45	52	61	46	53	57	60	56	58	45	58	63	44	52	61	42	46	46	53	53	38	30	31	31	38	46	45	48.4
	Minimum	34	34	33	33	30	38	34	31	40	43	40	40	36	36	42	36	35	39	31	34	39	42	38	27	20	21	18	27	31	38	34.0
<i>The Southern Interior.</i>																																
Bridgeton.....	Maximum	53	50	52	48	45	60	55	56	64	68	65	66	50	55	62	50	56	67	55	52	52	60	56	41	39	32	35	38	47	49	52.6
	Minimum	26</																														



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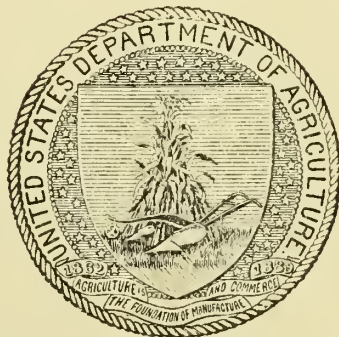
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FEB 7 1918

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

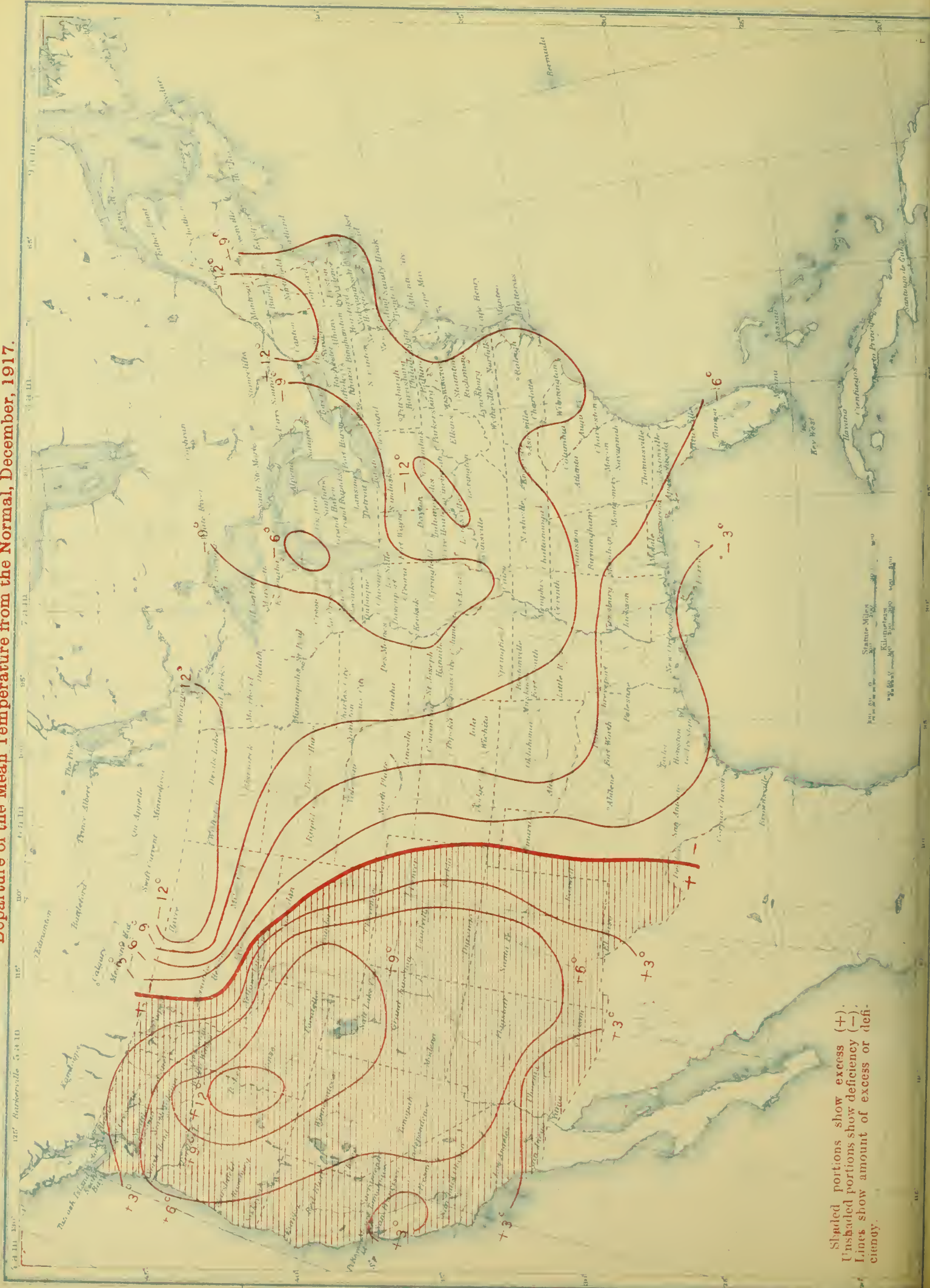
DECEMBER, 1917.

BY
G. HAROLD NOYES
METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
JANUARY 21, 1918.

Departure of the Mean Temperature from the Normal, December, 1917.



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

VOL. XXX. TRENTON, N. J., DECEMBER, 1917. No. 12.

GENERAL SUMMARY.

The weather in New Jersey during December, 1917, will serve to refresh the memory of the "oldest inhabitant" regarding an "old-fashioned winter." Since State averages were first compiled in 1885, this month has broken all its previous records for both extreme low and average temperatures. There have been but few Januarys or Februarys colder than the December under review, whereas normally they would be considerably colder. The rain storm which occurred at the close of November, continuing into December, was attended by moderate temperatures, which were, in turn, followed by freezing weather at night for about the first ten days. Thereafter, the thermometer was not sufficiently above freezing to cause any thawing conditions worth noting. Snow falling on the 13th was later reduced to an ice coating in nearly all sections, which lasted to the close of the month. Sleighing in central and northern country districts was excellent and continuous. All bodies of water were ice bound, including Barnegat Bay, and the oyster and fish business was practically terminated. The Delaware River was frozen to below Burlington, and the ice harvest was commenced with most favorable prospects, in practically all sections of the State. The cold weather culminated during the last three days in temperatures below zero throughout the State, the extreme minima ranging from -2° to -29° .

The mean stage of the Delaware River at Phillipsburg was 1.6 feet for the 16 days when it was not frozen. At Trenton the mean daily stage was 1.1 feet, which was 1.3 feet below normal.

The temperature departure from normal for the year 1917, by sections is: The Highlands, -2.1° ; Red Sandstone Plain, -1.9° ; Southern Interior, -1.9° ; The Seacoast, -2.1° . The precipitation accumulated departure from the normal for the year 1917, by sections is: The Highlands, -10.05 ; Red Sandstone Plain, -9.61 ; Southern Interior, -3.39 ; The Seacoast, -3.49 .

TEMPERATURE.

The mean monthly temperature of the month, as deduced from observations of 35 stations was 24.8° , which was 8.2° below normal. The highest temperature was 54° at Atlantic City on the 8th, and the lowest 29° below zero at Culvers Lake on the 31st. The greatest range of temperature was 42° at Monton on the 24th. The warmest station was Cape May City, with a mean of 29.3° , and the coldest, Newton, with a mean of

19.0° . The least subnormal departure in monthly temperature was 5.1° at Vineland, and the greatest, 10.8° at Charlotteburg.

PRECIPITATION.

The average total precipitation of the State, as deduced from observation of 39 stations, was 3.18 inches, which was 0.66 inch below normal. The average total snowfall was 11.5 inches, which was 5.2 inches more than normal. The greatest monthly amount was 5.46 inches at Jersey City, and the least, 1.55 inches at Trenton. The greatest precipitation in any 24 consecutive hours was 2.15 inches at Elizabeth on the 13th-14th. The greatest monthly total snowfall was 23.5 inches at Dover. The principal dates of snowfall were: 8th, 10th, 12th to 14th, 17th, 25th, and 29th. At Charlotteburg, the storm of the 13th-14th amounted to 20 inches. The average number of days on which precipitation occurred was 8, which was 1 less than normal.

WIND.

The prevailing wind direction was from the northwest, with an approximate velocity of 16 miles per hour, which is unusually high. The highest velocity, sustained for 5 consecutive minutes, was 88 miles per hour from the southeast at Long Branch on the 8th. The Observer at Long Branch reported that this gale together with an 80 mile gale on the 13th did considerable damage along the shore in that vicinity. Other dates of heavy wind velocities along the coast were the 1st, 2d, 9th, 10th, 11th, 13th, 14th, and 25th.

PRESSURE.

The barometric pressure, reduced to sea level, averaged 30.24 inches, which was 0.14 inch above normal.

COMPARATIVE DATA FOR DECEMBER.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more precip.
1885.....	35.3	60	6	3.15	4.33	2.47				
1886.....	29.1	60	-2	3.51	4.65	1.62				
1887.....	33.7	62	6	5.29	7.32	3.64			12	10
1888.....	34.9	65	5	3.69	4.95	2.05			8	8
1889.....	41.5	71	8	1.62	3.69	0.25			9	9
1890.....	30.9	56	3	3.89	5.74	2.34	11	10	10	8
1891.....	40.9	71	9	4.25	5.32	2.25	13	9	9	8
1892.....	30.4	68	1	1.87	3.09	1.30	9	11	11	6
1893.....	34.9	70	5	3.39	4.66	1.67	11	10	10	11
1894.....	34.8	66	-3	4.36	6.39	1.64	12	9	10	9
1895.....	37.2	70	3	2.61	5.42	1.71	11	9	11	6
1896.....	31.3	64	-15	1.53	2.70	0.85	14	9	8	4
1897.....	35.1	69	-3	4.90	6.44	3.07	8	11	12	11
1898.....	33.3	66	-2	3.53	4.85	2.38	12	10	9	9
1899.....	35.5	69	-1	2.11	4.30	1.29	14	10	7	7
1900.....	34.4	64	-2	2.59	3.97	1.47	14	10	7	6
1901.....	32.6	68	-8	7.30	9.45	4.87	12	9	10	11
1902.....	31.7	62	-11	7.23	8.99	5.81	13	7	11	13
1903.....	28.6	56	-13	4.08	5.49	3.20	14	9	8	9
1904.....	27.0	60	-15	3.19	5.38	2.06	10	7	14	12
1905.....	36.3	61	5	3.65	5.60	2.58	14	8	9	7
1906.....	33.0	70	-5	3.99	6.18	2.70	9	8	14	13
1907.....	36.6	70	-3	4.91	7.13	3.55	12	8	11	9
1908.....	34.0	72	1	3.63	5.26	2.10	10	8	13	11
1909.....	29.8	60	-15	4.45	5.51	3.55	14	8	9	5
1910.....	26.5	58	-14	2.79	4.60	1.92	11	10	10	9
1911.....	38.4	70	2	3.77	5.09	2.94	10	7	14	11
1912.....	36.9	68	-1	4.73	6.33	3.40	12	9	10	9
1913.....	37.7	63	-11	3.03	4.59	1.47	13	9	9	7
1914.....	31.1	66	-12	5.33	9.12	2.99	10	6	15	12
1915.....	31.9	64	3	4.82	7.83	2.19	12	9	10	8
1916.....	32.3	70	-8	4.61	6.34	3.35	13	8	10	11
1917.....	24.8	54	-29	3.18	5.46	1.55	13	7	11	8

Climatological data for December, 1917.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.				Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation .01 in. or more.	Clear.	Pt. cloudy.		Cloudy.	Prevailing direction of wind.
The Highlands and Kittatinny Valley.																				
Belvidere.....	Warren.....	289	26	21.9	-8.9	49	1	-14	31	30	3.18	-0.96	1.70	16.0	4	15	4	12	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	25	19.8 ^a	-10.8	51	21	-19	30	34	2.64	-1.75	.....	22.0	5	.....	4	.....	nw.	George S. Briggs.
Culvers Lake†.....	Sussex.....	848	16	.....	.....	.....	.....	-29	31	.....	2.10	-1.43	0.73	17.3	5	15	7	9	e.	Brice E. Riker.
Dover.....	Morris.....	600	33	21.2	-8.9	46	21	-14	30	30	3.58	-0.54	1.80	23.5	5	5	16	10	.....	William C. Harris.
Layton.....	Sussex.....	480	17	19.8	-7.6	45	1†	-18	31	36	2.55	-1.62	1.44	22.4	7	12	4	15	ne.	A. M. Depue.
Newton.....	Sussex.....	769	36	19.0	-10.3	43	1	-19	30	30	2.39	-1.31	0.86	21.5	8	16	8	7	n.	Irving G. Kern.
Phillipsburg.....	Warren.....	363	35	22.0	-9.3	45	1	-12	31	29	2.55	-1.13	1.02	18.8	8	13	7	11	n.	D. Wilson Smith.
Sussex.....	Sussex.....	442	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. W. Tittsworth.
Means and extremes.....	.....	.....	.....	20.6	-9.3	51	21	-29	31	36	2.64	-1.30	1.80	20.2	6	13	8	10	n.	.....
The Red Sandstone Plain.																				
Bergen Point††.....	Hudson.....	37	20	25.4 ^b	-7.6	44	1†	-14	30	29	4.64*	+0.65	1.70	7.5	7	7	15	9	nw.	William H. Mitchell.
Boonton.....	Morris.....	400	§27	20.6	.....	48	1	-21	30	42	2.67	-1.43	1.06	13.9	6	21	6	4	.....	J. W. Demmers.
Chatham.....	Morris.....	330	15	.....	.....	.....	.....	.....	.....	.....	3.44	-0.37	1.38	.....	12	18	8	5	.....	Paul Molitor.
Elizabeth.....	Union.....	45	38	24.5	-9.0	47	1	-15	30	32	5.14	+1.35	2.15	14.7	10	14	9	8	nw.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	29	24.6	-7.4	49	1	-8	30	35	2.79	-0.89	1.20	14.0	5	18	2	11	nw.	Hiram E. Deats.
Highwood.....	Bergen.....	90	28	21.8	-10.6	46	1	-15	30	30	4.08	-0.08	1.37	15.4	7	12	7	12	nw.	Charles J. Bates.
Jersey City.....	Hudson.....	10	18	25.3	-8.7	46	1	-12	30	24	5.46	+1.90	2.09	12.6	9	13	5	13	n.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Thomas R. Hunt.
Little Falls.....	Passaic.....	180	§14	24.2 ^d	.....	46	1†	-10	31	27†	3.06	-0.78	1.10	17.9	6	17	3	11	w.	Montclair Water Co.
Newark.....	Essex.....	159	75	23.6	-9.4	45	1	-13	30	29	3.52	-0.28	1.60	23.5	9	16	1	14	ne.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	110	64	25.4	-7.7	46	1	-15	30	28	3.13	-0.62	1.08	13.9	7	15	8	8	nw.	N. J. Experiment Station.
Palisades Park.....	Bergen.....	80	2	22.0	.....	45	21	-15	30	29	4.03	.....	1.40	15.4	9	14	5	12	nw.	George P. Kirsten.
Paterson.....	Passaic.....	80	46	24.8	-8.3	46	1†	-13	30	26	3.94	-0.17	1.65	17.5	7	12	6	13	nw.	Marion T. Probert.
Plainfield.....	Union.....	100	31	.....	.....	48	1	-14	30	.....	3.99	+0.10	.....	21.0	.....	.....	.....	.....	.....	John Neagle.
Pompton Plains.....	Morris.....	195	15	.....	.....	.....	.....	.....	.....	.....	3.87	+0.13	1.69	21.0	7	.....	.....	.....	.....	M. S. Taylor.
Somerville.....	Somerset.....	60	35	23.7	-8.2	47	1	-18	31	36	3.68	+0.11	1.90	13.2	8	15	3	13	nw.	A. A. Macdonald.
South Orange.....	Essex.....	200	47	23.1	-8.9	48	1	-14	30	26	.....	.....	1.40	19.8	7	16	5	10	w.	Dr. W. J. Chandler.
New York, N. Y.....	.....	365	47	25.0	-9.4	46	1	-13	30	28	3.70	+0.25	1.41	11.7	9	10	7	14	nw.	U. S. Weather Bureau.
Means and extremes.....	.....	.....	.....	23.8	-8.6	49	1	-21	30	42	3.77	-0.08	2.15	16.1	8	15	6	10	nw.	.....
The Southern Interior.																				
Bridgeton.....	Cumberland.....	30	36	28.8 ^a	-6.8	50	1†	-5	30	33	2.20	-1.67	0.83	2.0	7	14	7	10	nw.	Henry A. Jorden.
Burlington.....	Burlington.....	12	§31	26.8	-7.3	48	1†	-7	30	30	3.14	-0.77	1.43	4.0	10	16	4	11	nw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	25	.....	.....	.....	.....	-6	30	.....	1.81	-1.88	0.68	5.1	7	11	10	10	n.	W. Rex B. Sutcl.
Hammonton.....	Atlantic.....	103	15	.....	.....	.....	.....	.....	.....	.....	3.00	-1.10	1.29	1.9	4	21	1	9	nw.	G. H. Parkhurst.
Hightstown.....	Mercer.....	120	25	25.8	-7.8	47	1†	-12	30	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	G. Franklin Eldridge.
Imlaystown††.....	Monmouth.....	185	29	25.2	-9.4	50	21	-14	30	32	3.38	-0.19	1.53	5.2	8	10	11	10	nw.	F. B. Jones.
Indian Mills.....	Burlington.....	76	28	26.6	-7.4	49	1	-10	30	34	2.64	-1.45	0.66	4.7	9	14	7	10	nw.	James M. Armstrong.
Lakewood.....	Ocean.....	54	14	26.6	-7.2	52	21	-11	30	34	4.32	+0.60	1.84	5.0	9	13	3	15	nw.	R. W. Holman.
Moorestown.....	Burlington.....	75	55	27.3	-6.0	49	2	-8	30	30	2.57	-1.01	1.00	4.7	9	11	9	11	nw.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	10	.....	.....	.....	.....	.....	.....	.....	2.79	.....	1.06	2.9	9	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	19	.....	.....	.....	.....	.....	.....	.....	3.52	-0.15	1.27	.....	9	17	3	11	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	46	24.7	-9.7	47	1	-7	30	27	1.55	-1.61	0.69	6.2	9	10	5	16	n.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	24	28.4	-6.1	50	1†	-8	30	29	3.32	-0.36	1.10	5.0	8	10	11	10	nw.	Frank R. Austin.
Vineland.....	Cumberland.....	109	49	29.0	-5.4	49	1†	-5	30	31	2.27	-1.57	.....	.....	9	13	8	10	w.	H. C. Himes.
Woodbine.....	Cape May.....	43	26	28.8 ^b	-6.2	51	9	-6	30	30	3.54	-0.36	1.04	3.0	9	.....	.....	.....	.....	Baron de Hirsch Agr. Sch.
Philadelphia, Pa.....	.....	117	47	28.0	-7.7	50	8	-4	30	30	2.53	-0.51	1.36	7.4	11	9	8	14	nw.	U. S. Weather Bureau.
Means and extremes.....	.....	.....	.....	27.0	-7.3	52	21	-14	30	34	2.90	-0.89	1.84	4.1	8	13	7	11	nw.	.....
The Sea Coast.																				
Asbury Park.....	Monmouth.....	22	28	27.3 ^c	-7.2	49	1	-9	30	25†	3.17	-0.47	1.64	1.6	10	15	6	10	nw.	Wilbur H. Pancoast.
Atlantic City.....	Atlantic.....	16	44	29.0	-7.4	54	8	-5	30	31	2.13	-1.61	0.93	3.7	7	9	9	13	n.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	33	29.3	-8.7	50	8	-2	30	24	2.43	-1.35	0.78	2.1	11	11	9	11	n.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	10	26.5	.....	49	1	-8	30	23	3.14	.....	0.98	4.2	11	10	7	14	nw.	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	19	26.5	-8.1	49	1	-5	30	26	4.00	+0.15	1.51	3.8	10	10	8	13	nw.	U. S. Weather Bureau.
Means and extremes.....	.....	.....	.....	27.7	-7.8	54	8	-9	30	31	2.97	-0.82	1.64	3.1	10	11	8	12	nw.	.....
For the State.....	.....	.....	.....	24.8	-8.2	54	8	-29	31	42	3.18	-0.66	2.15	11.5	8	13	7	11	nw.	.....

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

* Received too late to be included in the means.

Reference letters, ^a, ^b, ^c, etc., appearing in the table indicate number of days missing; for example, ^b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Imlaystown is Cream Ridge.

Daily precipitation for December, 1917.

Stations.	Watersheed.	Day of month.																															Total.	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
The Highlands and Killbuck Valley.																																		
Belvidere.....	Delaware.....	.60							.80						1.70												.08						3.18	
Charlotteburg.....	Passaic.....	1.15							* .49						* 1.00										T.	T.	.08						2.64	
Culvers Lake.....	Delaware.....	.70							.31 .30			T.	T.	.73					T.						T.	.06			T.	T.			2.10	
Dover.....	Passaic.....	1.14							.55						.80 1.00										T.	.09							3.58	
Layton.....	Delaware.....	.57							.44 .04	T.				.02 1.42				.03									.03						2.55	
Newton.....	Delaware.....	.70							.67 .02	.04			.01	.01 .85			T.	T.	T.	T.					T.	.09				T.	T.		2.39	
Phillipsburg.....	do.....	.51							.49 .33	.02			T.	T.	1.02		.01	.05			T.				T.	.12					T.		2.55	
Sussex.....	Hudson.....																																	
The Red Sandstone Plain.																																		
Bergen Point.....	Coast.....	1.10							1.70	T.	T.			.06 1.51			T.	.05									.12				.10		4.61	
Boonton III.....	Passaic.....	1.06							.64			T.	T.	.86				.01	T.								.03	.05			.01	.01	2.67	
Chatham II.....	do.....	1.38							.55 .02			*	* .02	1.18			.02	.02	T.		T.						*	.17			* .08		3.44	
Elizabeth.....	Coast.....	1.39							* 1.27	.03			.01	* 2.15			.03	T.							T.	.15					.11		5.14	
Flemington.....	Raritan.....	.98							.49			T.	T.	1.20		T.	T.									.03	.09				T.		2.79	
Highwood.....	Hackensack.....	1.37							1.00		T.			.06 1.28			T.	.01	T.								.17				.19		4.08	
Jersey City**.....	Coast.....	1.20							1.82		.02		.01	* 2.09			T.	.05	T.							T.	.18				.09		5.46	
Lambertville.....	Delaware.....	1.20							.66	.20			T.	.03 1.62	T.	T.	.03	.02		T.							.09				.14		3.94	
Little Falls**.....	Passaic.....	1.05							.71	T.	T.		T.	.81 .29		T.	T.	T.	T.						T.	.15					.05		3.06	
Newark**.....	Coast.....	.73							.78		.02		.03	.80 .80		T.	.05										.11				.20		3.52	
New Brunswick.....	Raritan.....	1.00							.74 .06				T.	T.	1.08		T.	.01	T.								.09				.15		3.13	
Palisades Park.....	Hackensack.....	1.40							1.10		.01		.01		1.23			.03	.02								.15				.08		4.03	
Paterson.....	Passaic.....	1.20							.66	.20			T.	.03 1.62	T.	T.	.03	.02		T.							.09				.14		3.94	
Plainfield**.....	Raritan.....																																	
Pompton Plains I.....	Passaic.....	1.19							.78				T.	1.69			T.	T.									.04	.07			.04	.06		3.87
Somerville.....	Raritan.....	1.06							.21 .29	.02			.05	T.	1.90												.09					.06		3.68
South Orange.....	Rahway.....	1.23							.88		.05			T.	* 1.40		T.	T.	T.							T.	.06				T.	.06		3.70
New York, N. Y.***	Coast.....	.98							1.41		.02		.02	.80 .23		T.	.02										.10				.12			
The Southern Interior.																																		
Bridgeton.....	Coast.....	.55							.45		.05		.05	* .83			.05																2.20	
Burlington.....	Delaware.....	.84							.60		.05			T.	* 1.43			*	.03								*	.09			.10		3.14	
Clayton.....	Maurice.....	.50							.24		.18		.05	T.	.68	T.	T.										T.	.15			.01		1.81	
Hammonton.....	Mullica.....	.72							1.29		T.		.13	.86			T.										T.				T.		3.00	
Hightstown.....	Raritan.....																																	
Imlaytown.....	Delaware.....	.70							.30		.33		.04		1.53			.08										.10			.30		3.38	
Indian Mills.....	Mullica.....	.66							.45 .43	.15		.04	T.	.65		T.	.02											.16			.08		2.64	
Lakewood.....	Metedeconk.....	.94							1.04		.06		.20	.07 1.84		T.	.06											.07			.04		4.32	
Moorestown.....	Delaware.....	.74							.40 .20	.05		.05	T.	1.00			.01											.08			.04		2.57	
Northfield.....	Coast.....	1.06							.46	.01	.05		.12	.07 .82			.02										.18	T.					2.78	
Pleasantville.....	Coast.....	1.27							.90	T.	.13		.20	.78 .04		T.	.05	.01										.14				T.		3.52
Trenton***.....	Delaware.....	.25			T.				.39		.01		T.	.60 .09		.01	.01		T.								T.	.11			.08		1.55	
Tuckerton.....	Coast.....	1.10							.30 .59	.10	.48		.16	.96		*	*	*										.23			T.		3.92	
Vineland.....	Maurice.....	.48							.50 .18	.05	*	*	*	.89		T.	.01											.16			T.		3.27	
Woodbine.....	Coast.....	1.04							.82	.32	.08		.38	.24 .46	T.		.10											.10			T.		3.54	
Philadelphia, Pa.....	Delaware.....	.03							.70		.10		.11	1.10 .26		.02	.03										.02	.05			.11		2.53	
The Sea Coast.																																		
Asbury Park.....	Coast.....	.39							.96		.02		.04	1.42	.22		.05	.02		T.	T.						T.	.05			.06		3.17	
Atlantic City***.....	do.....	.09							.57		.08		.23	.93	T.		.05	T.	T.								T.	.18			T.		2.13	
Cape May City.....	do.....	.75			T.		.04	T.	.78	.03	.01		.15	.41 .19			.01											.05			.01		2.43	
Long Branch**.....	do.....	.84							.94		.02		.04	.94 .04		.05	.02	.01										.10			.14		3.14	
Sandy Hook***.....	do.....	.97							1.27		.02		.04	1.05 .46		.02	.02	T.	T.								T.	.09			.06		4.06	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded.

|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.

* Precipitation included in the next following measurement. ** Precipitation for 24-hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

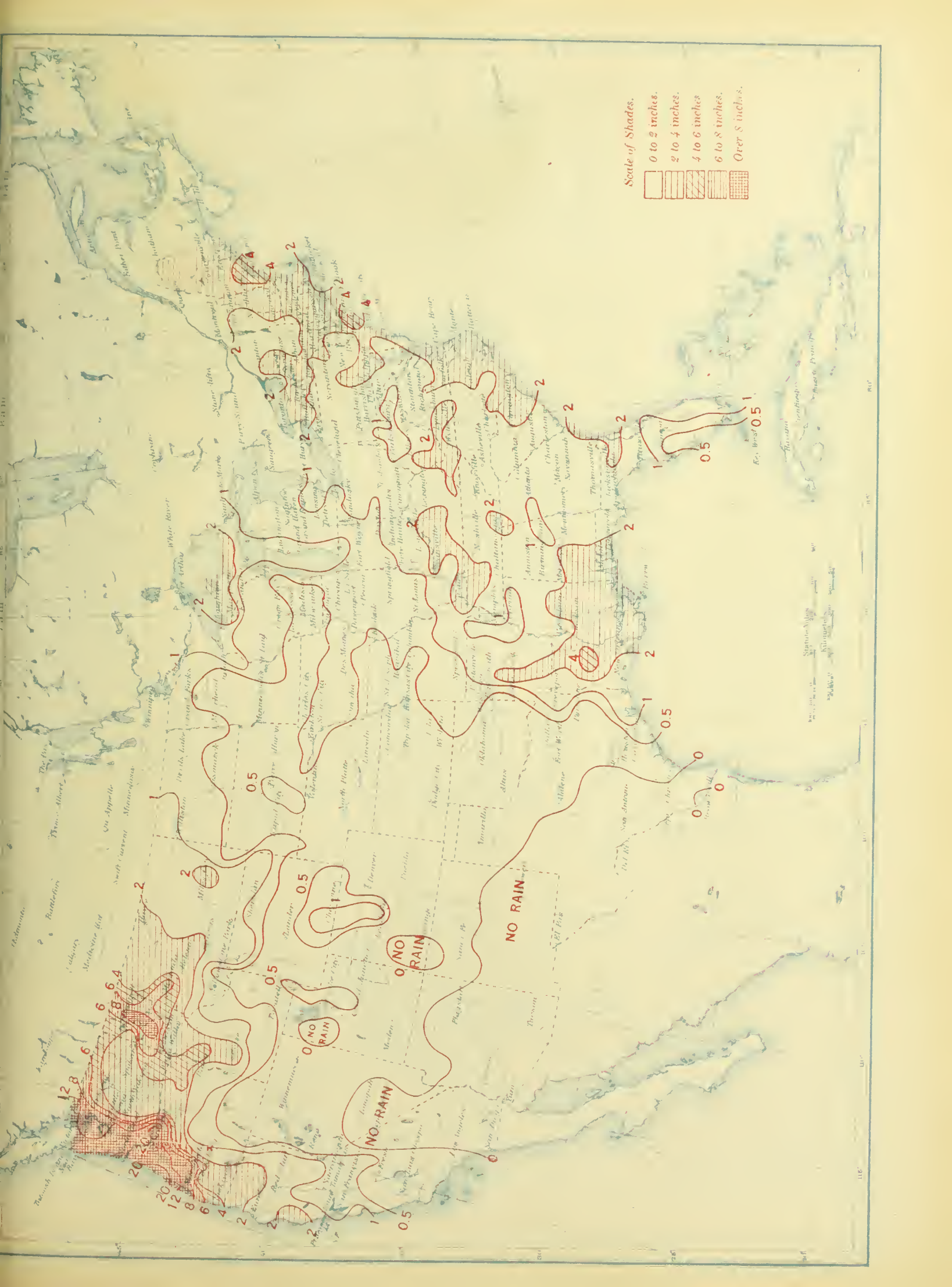
Stations.	Pressure.					Wind.			Moisture.		Sun- shine	
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	Percentage of possible sunshine.
							Miles per hour.	Direction.	Date.			
Atlantic City.....	30.24	30.73	16	29.26	8	10	44	se.	77	74	47	
Cape May City.....	30.25	30.69	27	29.32	8	11	48	s.	77	74	47	
Long Branch.....	30.23	30.76	16	29.14	14	21	45	se.	72	66	67	
Newark.....	30.22	30.74	16	29.10	14	20	45	nw.	70*	57†	56	
New York, N. Y.....	30.22	30.74	16	29.10	14	20	48	nw.	70	58	65	
Palisades Park.....	30.25	30.71	16	29.06	14	12	38	nw.	68	65	47	
Philadelphia, Pa.....	30.23	30.78	16	29.23	8	21	65	w.	78	72	55	
Sandy Hook.....	30.23	30.76	16	29.09	14	21	65	nw.	78	71	55	
Trenton.....	30.23	30.76	16	29.23	8	14	52	nw.	78	71	55	

§ Two directions and dates

* 7 a. m. † 9 p. m.

Daily temperatures for December, 1917.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.	
<i>The Highlands and Kittatinny Valley.</i>																																	
Belvidere.....	Maximum	49	39	44	34	43	41	34	30	20	15	21	22	31	31	24	16	21	29	36	39	40	40	28	40	40	31	24	30	17	10	6	30.2
	Minimum	35	28	20	26	23	23	23	16	11	5	5	5	10	21	4	-3	7	13	26	31	22	22	-2	18	28	18	11	0	0	-11	-14	13.6
Charlotteburg.....	Maximum	42	33	43	35	39	...	35	31	37	15	18	22	23	29	21	25	26	30	34	38	51	44	33	37	43	30	15	32	20	5	-3	29.4 ^a
	Minimum	33	27	19	22	14	...	13	12	11	4	3	-1	6	18	3	4	8	12	19	29	17	26	-5	17	29	11	-7	3	-4	-19	-15	10.3 ^a
Dover.....	Maximum	44	35	42	36	41	35	31	38	38	16	21	20	29	27	30	19	27	31	35	38	46	41	33	38	40	32	20	33	7	4	7	29.8
	Minimum	34	22	21	26	21	19	16	14	9	6	4	6	8	15	5	3	12	18	27	25	20	13	3	25	20	12	0	4	-9	-14	-12	12.7
Layton.....	Maximum	45	39	45	35	43	37	37	23	33	14	22	21	22	26	21	12	26	28	35	38	45	43	29	39	39	29	24	32	11	5	8	29.2
	Minimum	34	25	21	22	18	17	12	12	10	4	2	-4	0	20	3	-9	7	3	25	31	25	23	-7	24	28	21	-7	0	-7	-15	-18	10.3
Newton.....	Maximum	43	40	...	39	40	35	32	33	33	25	20	22	26	24	10	19	25	34	36	40	41	28	33	40	24	19	28	11	4	-2	27.4 ^a	
	Minimum	33	24	20	22	23	20	13	11	8	2	3	6	6	16	6	0	4	10	20	30	18	19	-2	20	20	12	1	4	-6	-19	-18	10.5
Phillipsburg.....	Maximum	45	40	41	38	41	38	34	32	39	15	20	20	28	30	22	16	21	29	35	39	39	40	31	40	38	32	23	31	6	6	7	29.5
	Minimum	36	27	21	28	25	25	18	17	11	6	7	9	11	20	7	3	8	14	25	32	22	26	2	23	30	14	5	5	-7	-10	-12	14.5
Sussex.....	Maximum	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Minimum	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<i>The Red Sandstone Plain.</i>																																	
Bergen Point.....	Maximum	44	36	42	37	44	37	40	42	18	27	25	37	31	24	19	31	34	36	39	44	39	34	44	43	28	33	26	...	9	34.1 ^b		
	Minimum	...	24	22	28	28	29	...	21	18	10	9	15	14	19	11	9	14	21	19	29	26	26	16	24	26	18	...	13	-3	-14	-8	16.6 ^c
Boonton§§.....	Maximum	48	39	46	36	43	39	34	40	20	17	24	22	32	30	21	19	30	33	37	38	45	34	33	42	28	23	34	5	6	6	30.3	
	Minimum	34	32	23	21	20	20	17	12	15	7	8	3	9	15	9	-4	3	12	20	24	16	20	1	0	31	10	-3	2	0	-21	10.8	
Elizabeth.....	Maximum	47	42	45	37	44	38	36	33	40	17	25	24	30	35	24	21	30	34	35	41	44	39	34	44	39	33	24	36	32	7	10	32.9
	Minimum	39	29	20	27	24	26	19	18	15	8	11	14	24	8	-1	15	19	23	32	25	29	4	18	33	15	8	13	0	-15	-10	16.1	
Flemington.....	Maximum	49	39	47	39	44	38	37	38	41	17	25	22	28	33	25	19	28	33	38	39	45	39	35	39	37	33	23	38	25	8	9	32.6
	Minimum	37	30	24	31	27	29	20	19	15	9	10	12	15	22	10	-4	14	20	29	32	18	26	0	15	32	15	5	13	2	-8	-7	16.5
Highwood.....	Maximum	46	38	38	35	43	35	32	38	38	16	23	22	34	32	21	18	29	34	35	38	40	39	28	40	38	27	20	34	12	6	4	30.1
	Minimum	37	26	19	22	20	16	14	15	10	8	9	16	20	9	-7	13	16	14	31	28	21	-2	20	27	13	4	8	-4	-15	-9	13.5	
Jersey City.....	Maximum	46	39	40	36	44	38	32	40	41	17	25	25	35	34	24	24	30	34	36	39	42	40	32	38	42	30	27	35	15	2	8	31.9
	Minimum	39	28	25	29	28	30	21	20	17	11	10	17	16	17	12	10	16	21	26	34	29	27	14	30	30	19	11	15	-2	-12	-7	18.7
Lambertville.....	Maximum	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Minimum	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Little Falls.....	Maximum	46	39	41	37	44	37	35	40	18	23	24	34	32	24	23	32	37	28	43	46	42	32	43	41	...	40	...	4	9	33.4 ^b		
	Minimum	27	23	22	23	23	23	19	16	15	10	9	12	11	11	6	3	13	20	15	29	24	15	...	...	...	...	...	...	...	...	...	
Newark.....	Maximum	45	44	41	33	43	36	33	43	43	16	22	20	32	30	21	19	30	33	34	39	43	39	32	41	38	26	20	31	4	4	4	30.3
	Minimum	39	26	19	29	29	29	21	17	14	7	9	15	14	22	11	8	15	20	25	32	26	20	12	25	28	18	10	10	-2	-13	-9	17.0
New Brunswick.....	Maximum	46	43	41	37	42	40	33	44	44	18	22	23	35	43	24	17	28	32	35	40	42	42	41	43	40	26	27	33	28	5	6	32.9
	Minimum	38	29	23	30	26	30	20	...	16	8	9	14	15	22	10	9	15	20	28	32	25	29	28	23	26	17	10	15	1	-15	-12	15.0 ^a
Palisades Park.....	Maximum	44	36	41	35	44	37	34	39	39	17	24	23	34	33	23	19	29	34	35	38	45	40	32	41	36	27	21	34	8	0	5	30.5
	Minimum	36	22	22	22	20	23	15	13	10	9	12	10	19	6	0	13	17	17	31	28	18	3	28	21	13	3	8	-10	-15	-11	13.5	
Paterson.....	Maximum	46	41	44	37	46	40	34	33	40	17	25	23	31	33	25	20	30	34	36	39	44	41	30	42	39	36	25	35	24	3	10	32.4
	Minimum	39	26	24	27	27	25	20	16	14	9	9	13	14	24	10	7	15	20	19	32	25	27	22	20	34	16	10	14	0	-13	-8	17.3
Plainfield.....	Maximum	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Minimum	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Somerville.....	Maximum	47	42	45	36	45	40	35	35	41	17	23	24	31	34	24	20	30	34	36	41	45	38	33	44	35	24	25	35	27	9	8	32.8 ^c
	Minimum	38	29	22	28	20	25	19	15	14	9	9	7	13	21	8	-4	14	19	28	29	20	25	-3	12	33	15	1	16	4	-14	-18	14.6
South Orange.....	Maximum	48	40	40	...	40	35	33	36	39	17	22	22	32	32	20	19	29	34	36	39	41	41	29	40	39	28	19	34	8	4	5	30.0 ^a
	Minimum	36	24	23	27	29	29	19	17	13	10	9	12	15	19	10	9	16	21	26	33	24	20	8	21	26	17	8	-5	-14	-9	16.2	
New York, N. Y.....	Maximum	46	38	40	37	44	39	33	45	38	20	25	26	36	31	23	24	32	35	39	40	45	42	34	42	40	27	26	37	8	4	6	32.3
	Minimum	38	23	23	29	29	27	19	20	15	10	9	17	19	17	11	12	18	23	27	32												



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CLIMATOLOGICAL DATA

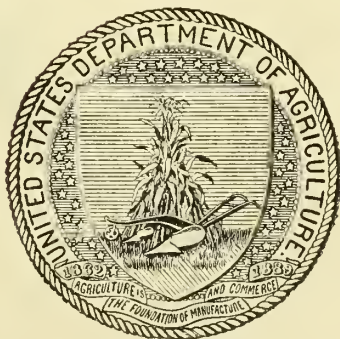
NEW JERSEY SECTION

ANNUAL SUMMARY, 1917.

BY

G. HAROLD NOYES

METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
FEBRUARY 11, 1918.

ANNUAL MEAN ISOTHERMS AND PREVAILING WIND DIRECTION, 1907



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Section Director.

TRENTON, N. J.

VOL. XXII. ANNUAL SUMMARY, 1917. No. 13.

GENERAL SUMMARY.

Observations at a considerable number of stations were first compiled to show State averages of weather data in the year 1885. Although several individual stations had continuous observations prior thereto, they were not of sufficient general distribution throughout the State to warrant their use in determining accurately the climate of such a diversified area as New Jersey. This period of more than 30 years is probably as yet too brief to include the ultimate ranges through which the weather in this State varies. While the year 1917 as a whole was not a record breaker, it closely approached the lowest records for temperatures and precipitation. And there were many individual days, weeks and months, that broke all previous records for heat, cold, and deficiency and excess of moisture. It was colder in New Jersey in 1904 than in 1917 by 0.3 degree only, and 1917 was one of the 7 driest years since 1885. Had it not been for the low temperature, the lack of precipitation would undoubtedly have caused severe drought conditions. The early part of the year, up to the later part of April was not greatly different from normal, and favorable progress was made in all pursuits out of doors which were dependent upon beneficial weather conditions. May was a very cold month, and retarded crop growth to such an extent that only remarkably favorable conditions in later periods could have regained the loss. June was approximately normal. July and August were decidedly above normal in heat, which for the midsummer months had a deleterious effect on crops. From early in September to the close of the year the temperature was persistently and decidedly subnormal, and the year closed with the most severe cold wave ever experienced in December; temperatures were below zero in every portion of the State. The low temperature in the Fall and early Winter had a severe economic result in this State and adjoining regions, by causing the consumption of emergency reserves of coal which ordinarily meet the deficit of production during the Winter.

The temperature for the year averaged 49.6° , which was 1.9° below normal. The warmest month was July, 74.2° ; and the coldest, December, 24.8° . The highest temperature was 104° at Elizabeth on July 31; and the lowest, 29° below zero at Culvers Lake on December 31. Charlotteburg, the coldest station for the year, averaged 44.8° , and Bridgeton, the warmest, 52.4° .

Totals of precipitation averaged for the year 40.80 inches, which was 6.59 inches below normal. The greatest monthly average was 6.99 inches in October, and the least, 0.56 in November. The greatest monthly precipitation was 9.74 inches in October at Lakewood, and the least, 0.18 inch in November at Lakewood also.

The total snowfall for the State averaged 39.2 inches, which was 5.6 inches more than normal. The northeastern districts received the greatest amounts of snow, and Cape May County the least.

The average number of days on which 0.01 inch or more precipitation occurred was 117, which was 3 more than normal. The average number of clear days was 166, which was 25 more than normal; partly cloudy, 96, which was 20 below normal; cloudy, 103, which was 5 below normal.

The prevailing wind direction was from the northwest.

THE WEATHER BY MONTHS.

JANUARY.—Typical winter weather prevailed, except for a slight deficiency of snow. Relatively frequent and regular alternations above and below normal temperature tended to relieve the tension usually occasioned by steady cold, when temperatures remain many days in succession below freezing. Snow remained on the ground on consecutive days in appreciable amounts only during the greater portion of the third week in northern districts. Temperature ranges did not reach to wide extremes, and cloudiness and sunshine were nearly normal. There were no snow storms averaging as deep as three inches, and most of them were hardly over an inch.

FEBRUARY.—Moderately pleasant weather prevailed, due principally to a deficient amount of rain and snow. Until after the middle of the month, it was steadily cold, with only one or two days above normal in temperature. Zero to 17° below occurred on the 13th. Ponds and streams were frozen most of the month, and an excellent harvest of ice was gathered, except in southern districts. The ground was bare most of the month, and cold waves occurred on the 2d, 5th and 10th, none of which were notably severe. The sun was obscured by cloudiness somewhat more than usual. Occurrences of sleet were practically without unfavorable result.

MARCH.—Sustained cold weather prevailed the first week of the month, with general snow storms and blustery weather. Thereafter temperatures were mostly above normal and conditions were more than ordinarily pleasant. Snow disappeared on the 7th in southern sections, and about the 12th in northern counties. The stage of the Delaware River averaged abnormally low for the month.

APRIL.—The first day of April was remarkably hot, maxima of 80° to 88° occurring in practically every part of the State. Thereafter, temperatures diminished to the night of the 8th-9th, when a snow storm of unusual depth, for April, occurred. April "showers" were almost entirely lacking, and more than half the month was clear, resulting in a rarely pleasant month. The water in streams and lakes was measurably lower than normal, and preparation of land for planting was advanced beyond the usual possibilities. An unbroken cool period at the last of the month effectually checked seed germination and plant development.

MAY.—The temperature broke all May records for the State for persistent low readings. Temperatures of below freezing occurred in nearly all of the northern half of the State on the 4th, and the only notably warm day was the 20th with readings from 80° to 90° . There was a deficiency in rainfall that prevented the occurrence of what might otherwise have been a disastrous crop situation; as it was, considerable replanting was necessary of such crops as corn, potatoes and beans.

JUNE.—Temperature and rainfall were nearly normal, and crop growth regained some of its backwardness due to a cold Spring.

On the 5th and 18th temperatures fell almost to freezing on the cranberry bogs, but there was no frost. Occurrences of rain were fairly uniform the first half of the month, but from the 16th to the 22d, there was practically none. On the 14th at 2:15 p. m. a very heavy downpour of rain commenced at Jersey City, amounting to 1.10 inches in 15 minutes, 1.90 inches in 30 minutes, 2.15 inches in an hour, and 3.78 inches in 2 hours.

JULY.—Temperatures were mostly subnormal the earlier part of the month, and above normal the latter part. A hot wave was at its maximum at the close of the month, with temperatures over 100° at many points, and average temperatures of some 15° above normal. Rainfall was at its greatest frequency during the second decade, and then being followed by critically high temperatures, the result favored the development of various forms of plant blight. Potatoes and tomatoes were the principal sufferers in this regard.

AUGUST.—The heat was greater than normal every day except about 5, with an unusual amount of sunshine and a moderate deficiency of rain. The hot wave continuing from July into the first two days of this month caused many heat prostrations, some of which reached fatal terminations in dense centers of population. Plant life also suffered from the weather conditions and indications of crop production were visibly diminished.

SEPTEMBER.—Low temperatures became persistently manifest early in this month, and continued with remarkable steadiness, not only throughout the month, but actually into February, 1918. Except on the 11th and 12th, low temperatures were not particularly noticeable, nevertheless it was the coldest September on record. Killing frost occurred on the 11th in the northernmost part of the State, and "light" frost, at least, occurred in practically every community on the 11th or 12th, and effected considerable crop damage, especially to cranberries. Ten days later the warmest period of the month occurred, which culminated in a thunderstorm in southern counties, attended by a damaging hail storm in Cumberland County.

OCTOBER.—Cool weather continued with remarkable uniformity throughout the month, and culminated in a cold wave on the 31st, with temperatures well down in the twenties, and to an extreme minimum of 17°. It rained more frequently than usual, and excessive amounts occurred on the 24th and 30th. This rain supplied a greater amount of soil moisture than has been present for a long time, and lakes, springs and streams were unusually full, resulting in a moderate freshet at the close of the month in the Delaware River. An earthquake of very moderate force occurred on the 19th, several shocks having been felt in the vicinity of Pleasantville, Northfield, Somers Point, and Ocean City, from 12:05 p. m. to 2:53 p. m.

NOVEMBER. The cold weather continued steadily during the month and no rain fell until the 20th. This period was also one of remarkably clear skies, and the number of clear days for the month, averaging the whole State, broke all previous records. These conditions, together with much wind, were contributing factors favorable for forest fires, which, the State Firewarden reported, broke out in great numbers in all parts of the State.

DECEMBER.—All previous temperature records for December were broken this month. After the first few days the thermometer was not sufficiently above freezing to cause any thawing conditions worth noting. Snow falling on the 13th was later

reduced to a partial ice covering in nearly all sections, which lasted to the close of the month. Sleighing in central and northern country districts was excellent and continuous. All bodies of water were icebound, including Barnegat Bay, and the Delaware River was frozen to below Burlington. The cold weather culminated during the last three days in temperatures below zero throughout the State, the extreme minima ranging from -2° to -29°.

COMPARATIVE ANNUAL DATA FOR THE STATE.

Year.	Temperature.			Average precipitation.	Year.	Temperature.			Average precipitation.
	Mean.	Highest.	Lowest.			Mean.	Highest.	Lowest.	
1885	50.5	100	-2	37.87	1902	51.8	100	-11	59.44
1886	50.2	98	-10	46.54	1903	51.7	100	-16	56.25
1887	51.1	102	-6	47.66	1904	49.3	100	-34	37.41
1888	50.0	99	-12	52.20	1905	51.3	102	-18	42.06
1889	52.8	95	-3	63.33	1906	52.8	98	-15	46.38
1890	53.2	101	0	49.34	1907	50.4	96	-22	51.65
1891	53.2	102	1	47.98	1908	52.6	106	-17	42.58
1892	51.4	105	-6	42.04	1909	52.0	100	-15	40.86
1893	50.8	103	-21	47.90	1910	52.0	99	-15	39.73
1894	53.0	106	-11	47.37	1911	52.6	104	-12	50.36
1895	51.7	103	-12	37.29	1912	51.3	100	-32	46.61
1896	51.7	105	-15	42.51	1913	51.3	100	-11	46.99
1897	52.0	102	-6	51.72	1914	51.4	99	-18	39.23
1898	53.2	107	-15	52.35	1915	52.5	98	-5	47.37
1899	52.1	103	-21	45.84	1916	51.2	100	-18	38.17
1900	53.8	104	-9	42.71	1917	49.6	104	-29	40.80
1901	51.4	107	-8	51.80					

MONTHLY STATE DATA FOR 1917.

Month.	Temperature.				Precipitation.		
	Mean.	Depart- ure from normal.	Highest.	Lowest.	Average.	Depart- ure from normal.	Great- est.
January	31.4	+1.5	58	-6	3.26	-0.52	4.52
February	28.1	-1.9	62	-17	1.95	-1.91	2.80
March	38.2	+0.3	72	0	4.65	+0.58	7.14
April	48.8	-0.2	88	15	2.39	-1.12	3.54
May	54.0	-6.3	90	22	3.83	-0.15	6.83
June	68.9	-0.1	95	40	4.27	+0.35	7.14
July	74.2	+0.4	104	46	4.83	-0.08	7.93
August	74.0	+1.9	103	41	2.21	-2.75	5.68
September	61.5	-4.3	87	25	2.74	-1.23	6.13
October	50.7	-3.4	84	17	6.99	+3.24	9.74
November	39.8	-3.1	68	2	0.56	-2.87	1.15
December	24.8	-8.2	54	-29	3.18	-0.66	5.46
Year	49.6	-1.9	104	-29	40.80	-6.65	9.74

* Mean of 28 stations.

** Mean of the sums of 34 stations.

KILLING FROSTS.

Stations.	Last in spring.	First in autumn.	Stations.	Last in spring.	First in autumn.
<i>The Highlands and Kittatinny Valley.</i>					
Belvidere	May 4	Sept. 11	South Orange	May 4	Oct. 13
Charlotteburg	do. 24	do. 11			
Culvers Lake	do. 24	do. 11	<i>The Southern Interior.</i>		
Dover	do. 24	do. 11			
Layton	do. 24	do. 11	Bridgeton	Apr. 15	Oct. 13
Newton	do. 4	do. 11	Burlington	do. 15	do. 13
Phillipsburg	do. 4	Oct. 7	Clayton	do. 15	do. 13
<i>The Red Sandstone Plain.</i>					
			Highstown	May 4	
Bergen Point	Apr. 17	Oct. 13	Indian Mills	Apr. 17	Oct. 7
Boonton	May 24	Sept. 11	Lakewood	May 4	do. 7
Elizabeth	do. 4	Oct. 13	Moorestown	do. 4	do. 7
Flemington	do. 4	do. 7	Trenton	Apr. 17	do. 13
Highwood	do. 4	Sept. 11	Tuckerton	May 4	do. 7
Jersey City	Apr. 14	Oct. 13	Vineland	Apr. 15	do. 13
Lambertville	May 4	do. 13	Woodbine	do. 17	do. 13
Little Falls	do. 4		<i>The Sea Coast.</i>		
Newark	Apr. 13	Oct. 13			
New Brunswick	May 4	do. 7	Asbury Park	Apr. 15	Oct. 13
Palisades Park	do. 4	Sept. 11	Atlantic City	do. 15	do. 31
Paterson	do. 4	do. 11	Cape May City	do. 14	do. 31
Plainfield	do. 4	Oct. 7	Sandy Hook	do. 15	do. 31
Somerville	do. 21	Sept. 11			

Climatological Data for the Year 1917.

STATION.	Counties.	Elevation, feet.	Temperature (degrees Fahrenheit).						Precipitation (inches).						Sky.					
			Length of record, years.	Annual mean.	Highest.	Date.	Lowest.	Date.	Length of record, years.	Total for the year.	Greatest monthly.	Month.	Least monthly.	Month.	Total snowfall (unmelted).	Number days with .01 or more.	Number clear days.	Number partly cloudy days.	Number cloudy days.	Prevailing direction of wind.
The Highlands and Kittatinny Valley.																				
Belvidere.....	Warren.....	289	26	48.7	98	July 31	-14	Dec. 31	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Charlotteburg.....	Passaic.....	719	25	44.8	94	do. 30†	-19	do. 30	25	42.50	6.87	Oct	0.93	Nov	35.2	111	203	117	49	99
Culvers Lake.....	Sussex.....	848	.....	.....	.....	.....	.....	.....	16	31.23	6.26	do.	0.71	do.	51.2	122	208	79	78	w.
Dover.....	Morris.....	600	33	46.7	96	July 31	-14	do. 30	33	39.76	6.02	do.	0.65	do.	58.5	124	208	169	.....	e.
Layton.....	Sussex.....	480	17	.....	99	July 31	-18	Dec. 31	17	33.84	6.56	Oct	0.92	*	49.8	124	164	53	148	sw.
Newton.....	Sussex.....	769	36	.....	94	do. 31	-19	do. 30	36	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	nw.
Phillipsburg.....	Warren.....	363	27	49.4	99	do. 31	-12	do. 31	35	38.98	5.62	July	0.80	Nov	50.7	130	192	72	101	nw.
The Red Sandstone Plain.																				
Bergen Point.....	Hudson.....	37	20	49.7	99	July 31	-14	Dec. 30	20	.....	7.86	Oct	0.51	Nov	.....	.....	.....	.....	.....	nw.
Boonton.....	Morris.....	400	3	47.1	98	do. 31†	-21	do. 30	27	35.10	6.32	do.	0.59	do.	.....	.....	.....	.....	.....	nw.
Chatham.....	Morris.....	330	.....	.....	.....	do. 31	.....	.....	15	37.64	6.23	do.	0.54	do.	38.8	134	253	43	69	nw.
Elizabeth.....	Union.....	45	38	50.2	104	do. 31	-15	Dec. 30	38	44.45	7.86	do.	0.56	do.	50.7	115	124	141	100	nw.
Flemington.....	Hunterdon.....	140	20	50.2	102	July 31	-8	Dec. 30	29	35.96	5.01	Oct	0.83	Nov	45.6	115	213	62	90	nw.
Highwood.....	Bergen.....	90	28	47.6	98	do. 31	-15	do. 30	28	38.39	7.93	do.	0.60	do.	52.4	126	111	144	110	nw.
Jersey City.....	Hudson.....	10	18	51.0	101	do. 31	-12	do. 30	18	44.91	7.06	do.	0.74	do.	54.1	128	118	130	117	nw.
Lambertville.....	Hunterdon.....	80	30	.....	98	do. 31	.....	.....	30	.....	4.55	ar	.....	.....	.....	.....	.....	.....	.....	nw.
Little Falls.....	Passaic.....	180	3	49.3	99	Aug. 1	-10	Dec. 31	14	35.80	7.41	Oct	0.79	Nov	38.4	117	176	41	148	w.
Newark.....	Essex.....	159	74	.....	100	July 31	-13	do. 30	75	36.66	7.05	do.	1.13	do.	55.8	121	166	61	135	nw.
New Brunswick.....	Middlesex.....	110	64	49.8	98	do. 31	-15	do. 30	64	.....	7.34	do.	0.54	do.	50.6	118	187	92	86	w.
Palisades Park.....	Bergen.....	80	2	48.0	100	do. 31	-15	do. 30	2	38.95	7.98	do.	0.66	do.	55.7	129	151	117	97	nw.
Paterson.....	Passaic.....	80	46	50.7	101	July 31	-13	Dec. 30	46	34.47	6.39	Oct	0.58	Nov	36.0	120	.....	.....	.....	nw.
Plainfield.....	Union.....	100	31	.....	98	do. 31	-14	do. 30	31	41.87	6.84	do.	0.40	do.	52.2	.....	.....	.....	.....	nw.
Pompton Plains.....	Morris.....	195	.....	.....	.....	.....	.....	.....	15	41.22	6.46	do.	0.59	do.	47.0	124	.....	.....	.....	nw.
Somerville.....	Somerset.....	60	35	48.4	99	July 31	-18	Dec. 31	35	38.02	5.28	do.	0.61	do.	42.3	109	157	88	120	nw.
South Orange.....	Essex.....	200	47	48.9	98	July 31	-14	Dec. 30	47	40.70	8.44	Oct	0.75	Nov	48.0	107	150	108	107	w.
New York, N. Y.....	.....	365	47	49.8	98	do. 31†	-13	do. 30	47	39.28	5.96	July	0.68	do.	48.0	122	88	124	153	nw.
The Southern Interior.																				
Bridgeton.....	Cumberland.....	30	31	52.4	101	July 31	-5	Dec. 30	36	44.96	8.79	Oct	0.31	Nov	18.0	101	215	57	93	sw.
Burlington.....	Burlington.....	12	4	51.4	100	do. 31	-7	do. 30	31	44.11	8.23	do.	0.33	do.	.....	118	248	33	84	nw.
Clayton.....	Gloucester.....	126	21	.....	100	do. 31	-6	do. 30	25	42.13	9.25	do.	0.24	do.	21.1	116	195	90	80	nw.
Hammononton.....	Atlantic.....	103	.....	.....	.....	.....	.....	.....	15	.....	8.54	do.	0.28	do.	.....	.....	.....	.....	.....	nw.
Hightstown.....	Mercer.....	140	25	.....	99	July 31	-12	Dec. 30	25	.....	7.19	Oct	0.41	Nov	.....	.....	.....	.....	.....	.....
Indian Mills.....	Monmouth.....	185	29	.....	.....	.....	-14	do. 30	29	.....	6.70	do.	0.23	do.	.....	.....	.....	.....	.....	.....
Lakewood.....	Burlington.....	76	28	50.2	101	July 31	-10	do. 30	28	50.37	9.38	do.	0.32	do.	35.0	112	141	130	94	nw.
Moorestown.....	Ocean.....	54	14	49.1	98	do. 31	-11	do. 30	14	48.38	9.74	do.	0.18	do.	34.2	107	128	84	153	nw.
Northfield.....	Burlington.....	75	55	51.5	98	July 31	-8	Dec. 30	55	42.79	7.59	Oct	0.32	Nov	35.0	100	169	127	69	nw.
Pleasantville.....	Atlantic.....	25	.....	.....	.....	.....	.....	.....	10	44.70	7.63	July	0.20	do.	15.0	108	.....	.....	.....	.....
Trenton.....	Mercer.....	26	.....	.....	.....	.....	.....	.....	19	42.53	6.33	Oct	0.19	do.	.....	106	225	48	92	.....
Tuckerton.....	.....	190	46	50.3	98	July 31	-7	Dec. 30	46	34.47	5.30	do.	1.02	do.	33.6	123	118	106	141	nw.
Vineland.....	Ocean.....	23	19	50.7	103	July 31	-8	Dec. 30	24	41.91	6.86	Mar	0.50	Nov	27.2	104	170	123	72	nw.
Woodbine.....	Cumberland.....	87	49	.....	100	do. 31	-5	do. 30	49	.....	8.60	Oct	0.25	do.	.....	.....	.....	.....	.....	sw.
Philadelphia, Pa.....	Cape May.....	43	26	51.8	98	do. 31	-6	do. 30	26	.....	7.59	do.	0.31	do.	8.4	.....	.....	.....	.....	w.
.....	.....	117	47	53.5	101	do. 31	-4	do. 30	47	39.39	6.04	do.	0.86	do.	39.8	101	115	115	135	nw.
The Sea Coast.																				
Asbury Park.....	Monmouth.....	22	28	48.8	100	July 31	-9	Dec. 30	28	37.91	6.75	Oct	0.31	Nov	36.3	116	.....	.....	.....	se.
Atlantic City.....	Atlantic.....	16	44	50.8	99	do. 31	-5	do. 30	44	40.61	6.93	Mar	1.15	do.	16.6	108	116	135	114	nw.
Cape May City.....	Cape May.....	17	33	51.2	98	do. 31	-2	do. 30	33	41.52	7.51	Oct	0.30	do.	13.0	125	142	126	97	s.
Long Branch.....	Monmouth.....	25	10	.....	99	do. 31	-8	do. 30	10	57.73	8.23	do.	0.47	do.	44.0	128	141	119	105	nw.
Sandy Hook.....	Monmouth.....	22	19	49.7	98	do. 31	-5	do. 30	19	39.79	6.59	July	0.47	do.	37.7	119	111	138	116	nw.

† On other days also.

* Feb. and Nov.

Monthly and Annual Precipitation for the Year 1917, with Departures from the Normal.

STATIONS.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.		Annual.	
	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.
<i>The Highlands and Kittatinny Valley.</i>																										
Belvidere.....	.....	.....	.....	.....	3.48	-0.06	1.33	-1.94	3.85	-0.04	5.74	+1.34	4.27	-1.33	2.77	-2.19	1.68	-2.24	5.49	+1.65	0.83	-2.65	3.18	-0.96	.....	.....
Charlotteburg.....	3.45	-0.91	1.97	-2.69	4.91	+0.97	2.95	-0.98	4.83	+0.08	5.13	+0.87	4.39	-0.49	3.09	-1.66	1.29	-3.39	6.87	+2.46	0.93	-2.80	2.64	-1.75	42.50	-10.29
Culvers Lake.....	3.46	+0.28	1.18	-2.17	2.99	-0.44	1.46	-2.41	3.99	+0.49	5.58	+1.74	3.38	-1.38	1.83	-2.70	1.29	-2.52	6.26	+2.61	0.71	-2.11	2.10	-1.43	34.23	-10.04
Dover.....	4.52	+0.03	2.12	-2.12	4.74	+0.84	2.21	-1.30	3.73	-0.41	3.93	-0.19	4.01	-1.47	2.60	-2.40	1.65	-2.83	6.02	+2.02	0.65	-2.98	3.58	-0.54	39.76	-11.35
Layton.....	3.66	+0.16	0.92	-2.54	3.57	-0.10	1.92	-1.39	3.34	+0.01	5.20	+1.78	2.38	-2.05	1.74	-1.90	1.14	-2.73	6.50	+3.17	0.92	-2.16	2.55	-1.62	33.84	-9.37
Newton.....	3.40	-0.10	1.24	-2.59	2.28	-1.22	1.31	-1.90	3.94	-0.20	5.84	+2.05	4.32	-0.38	.....	.....	.....	.....	.....	.....	0.93	-2.01	2.39	-1.31	.....	.....
Phillipsburg.....	3.84	+0.19	1.79	-2.00	4.09	+0.44	1.19	-1.83	3.15	-0.90	4.55	+0.40	5.62	+0.77	4.16	-0.54	2.28	-1.50	4.96	+1.36	0.80	-2.48	2.55	-1.13	38.98	-7.22
<i>The Red Sandstone Plain.</i>																										
Bergen Point.....	3.08	-1.34	.....	.....	4.45	+0.23	3.22	-0.67	5.24	+1.76	4.85	+0.90	6.69	+1.18	1.84	-3.22	2.94	-1.59	7.86	+3.78	0.51	-3.07	4.64	+0.65	.....	.....
Boonton.....	3.78	-0.42	1.60	-2.61	4.17	+0.43	2.08	-1.68	4.50	+0.25	3.67	-0.07	2.92	-2.54	1.25	-4.14	1.55	-2.94	6.32	+2.48	0.59	-3.08	2.67	-1.43	35.10	-15.75
Chatham.....	3.76	-0.13	2.12	-1.74	4.08	+0.21	2.21	-1.44	4.09	+0.17	4.24	+0.20	4.08	-1.20	0.99	-3.93	1.86	-2.27	6.23	+2.56	0.54	-2.95	3.44	-0.37	37.64	-10.89
Elizabeth.....	3.43	-0.67	2.05	-2.21	4.53	+0.27	3.19	-0.38	3.92	0.00	3.24	-0.36	6.06	+0.80	1.74	-2.80	2.73	-1.33	7.86	+4.04	0.59	-2.78	5.14	+1.35	44.45	-4.07
Flemington.....	3.71	+0.24	1.70	-1.69	3.90	+0.29	2.17	-1.27	3.88	-0.41	3.87	-0.50	3.88	+1.08	1.86	-2.55	2.36	-1.62	5.01	+1.56	0.83	-2.52	2.79	-0.89	35.96	-10.44
Highwood.....	2.53	-1.54	1.58	-2.95	4.02	-0.13	2.44	-0.95	4.09	+0.25	5.00	+1.22	2.39	-2.98	2.28	-2.79	1.45	-2.71	7.93	+3.40	0.60	-3.03	4.08	-0.03	38.39	-12.29
Jersey City.....	2.79	-1.07	1.97	-1.97	4.76	+0.66	2.97	-0.73	3.75	+0.57	5.88	+2.58	4.96	+0.18	1.79	-2.86	2.78	-0.93	7.06	+3.31	0.74	-2.66	5.46	+1.90	44.91	-1.02
Lambertville.....	4.08	+0.34	1.57	-1.97	4.55	+0.44	2.90	-0.50	3.12	-0.95	4.08	-0.20	4.26	-0.78	1.20	-3.59	3.56	-0.62	4.28	+0.41	.....	.....	.....	.....	.....	.....
Little Falls.....	3.31	-0.91	1.67	-2.62	4.02	+0.03	2.32	-1.22	4.00	-0.76	3.85	-0.43	3.03	-2.56	0.91	-4.20	1.43	-3.17	7.41	+3.57	0.79	-2.73	3.06	-0.78	35.80	-15.78
Newark.....	2.92	-0.84	2.00	-1.68	3.52	-0.41	2.17	-1.56	3.08	-0.96	3.80	+0.17	3.99	-0.74	1.27	-3.97	2.21	-1.64	7.05	+3.28	1.13	-2.37	3.52	-0.28	36.66	-11.00
New Brunswick.....	.....	.....	1.77	-1.92	3.87	-5.04	2.49	-1.30	3.87	-0.04	3.62	-0.15	6.97	+1.92	0.87	-4.22	3.63	-0.22	7.34	+3.75	0.54	-3.05	3.13	-0.62	.....	.....
Palisades Park.....	2.90	.....	1.95	.....	4.05	.....	2.23	.....	3.84	.....	4.90	.....	2.40	.....	2.28	.....	1.73	.....	7.98	.....	0.66	.....	4.03	.....	38.95	.....
Paterson.....	2.89	-1.17	2.22	-2.18	4.24	+0.01	2.02	-1.47	4.28	-0.21	2.93	-1.39	2.71	-2.62	0.86	-4.27	1.41	-3.03	6.39	+2.24	0.58	-2.68	3.94	-0.17	34.47	-16.94
Plainfield.....	3.14	-0.75	1.91	-2.00	4.06	+0.25	2.55	-1.35	4.89	+1.06	4.05	-0.08	6.08	+0.68	1.12	-3.75	2.84	-1.61	6.84	+3.19	0.40	-3.19	3.99	+0.10	41.87	-7.45
Pompton Plains.....	3.77	-0.62	2.03	-2.40	4.55	+0.51	2.19	-1.37	4.02	-0.34	3.98	-0.18	4.63	-0.92	3.23	-1.85	1.90	-2.65	6.46	+2.70	0.59	-2.90	3.87	+0.13	41.22	-9.89
Somerville.....	3.07	-0.41	1.61	-1.94	4.25	+0.30	2.17	-1.38	4.03	-0.09	3.93	-0.22	4.31	-0.82	2.43	-2.28	2.65	-1.01	5.28	+1.87	0.61	-2.78	3.68	+0.11	38.02	-8.65
South Orange.....	3.60	-0.54	1.84	-2.18	4.48	+0.67	2.29	-1.20	4.12	+0.66	2.80	-0.76	4.92	-0.20	1.65	-3.74	2.09	-2.00	8.44	+4.63	0.75	-2.62	3.72	-0.11	40.70	-7.39
New York, N. Y.....	2.44	-1.35	1.70	-2.04	3.38	-0.72	2.35	-0.95	3.29	+0.11	5.57	+2.31	5.96	+1.42	1.79	-2.74	2.74	-0.85	5.68	+1.97	0.68	-2.76	3.70	+0.25	39.28	-5.35
<i>The Southern Interior.</i>																										
Bridgeton.....	3.26	-0.48	2.37	-1.73	6.48	+2.01	2.97	-0.46	4.37	+0.44	3.68	-0.09	5.70	+1.27	2.64	-2.10	2.19	-1.62	8.79	+5.26	0.31	-2.95	2.20	-1.67	44.96	-2.12
Burlington.....	3.85	+0.31	1.80	-1.94	4.84	+0.76	2.47	-0.90	3.83	-0.40	3.08	-0.84	4.92	-0.11	3.29	-2.32	4.33	+0.41	8.23	+4.78	0.33	-3.41	3.14	-0.27	44.11	-4.43
Clayton.....	2.36	-1.40	1.85	-2.17	5.00	+1.02	3.00	-0.14	3.60	+0.34	3.70	+0.30	4.81	+0.54	2.20	-2.95	4.31	+0.29	9.25	+5.74	0.24	-3.29	1.81	-1.88	42.13	-3.60
Hammonton.....	.....	.....	.....	.....	.....	.....	2.27	-1.57	3.23	-0.79	3.29	+0.10	5.40	+0.71	3.46	-1.22	4.09	+0.43	8.54	+5.06	0.28	-3.44	3.00	-1.10	.....	.....
Hightstown.....	3.35	-0.34	1.33	-2.41	4.95	+0.59	2.08	-1.83	3.54	-0.28	3.53	-0.48	.....	.....	2.36	-2.41	3.31	-0.57	7.19	+2.96	0.41	-3.22	.....	.....	.....	.....
Imlaystown.....	.....	.....	1.80	-1.78	.....	.....	2.05	-1.45	.....	.....	.....	.....	.....	.....	.....	4.16	-0.15	6.70	+2.63	0.23	-3.42	3.38	-0.19	.....	.....	
Indian Mills.....	3.19	-0.51	2.65	-1.31	6.11	+2.01	3.17	+0.04	3.45	-0.59	4.91	+1.12	7.93	+3.87	2.25	-2.92	4.37	-0.20	9.38	+5.80	0.32	-3.28	2.64	-1.45	50.37	+2.98
Lakewood.....	3.29	-0.49	1.99	-1.85	5.78	+1.35	2.86	-0.87	4.06	+0.20	4.00	+0.33	6.91	+1.88	1.28	-3.79	3.97	+0.09	9.74	+6.04	0.18	-3.47	4.32	+0.60	48.38	+0.02
Moorestown.....	2.97	-0.51	1.84	-1.79	5.16	+1.29	2.32	-0.87	3.09	-0.94	3.50	-0.30	5.64	+1.06	3.90	-0.84	3.95	+0.19	7.59	+3.95	0.32	-3.10	2.57	-1.01	42.79	-2.87
Northfield.....	2.83	.....	2.19	.....	7.14	.....	2.37	.....	4.36	.....	4.76	.....	7.63	.....	1.48	.....	2.92	.....	6.03	.....	0.20	.....	2.79	.....	44.70	.....
Pleasantville.....	2.98	-0.42	2.55	-0.41	4.68	+1.44	2.88	-0.64	3.78	+0.42	4.71	+0.94	5.97	+1.83	1.74	-2.95	3.20	-0.21	6.33	+2.71	0.19	-3.17	3.52	-0.15	42.53	-0.61
Trenton.....	3.10	-0.07	1.47	-1.72	3.45	-0.59	2.29	-1.00	2.90	-0.62	3.15	-0.34	4.24	-0.53	2.11	-3.26	3.89	+0.30	5.30	+1.89	1.02	-2.41	1.55	-1.61	34.47	-9.96
Tuckerton.....	3.13	-0.53	2.20	-1.59	6.86	+2.47	3.54	-0.25	3.19	-0.24	3.67	+0.10	2.39	+1.51	0.87	-4.91	6.13	+2.77	5.51	+1.84	0.50	-2.96	3.92	-0.36	41.91	-5.37
Vineland.....	2.77	-1.00	1.87	-2.18	.....	.....	3.30	-0.04	2.08	-1.69	3.61	+0.03	4.76	+0.25	2.64	-2.33	2.76	-1.08	8.60	+5.14	0.25	-3.05	2.27	-1.57	.....	.....
Woodbine.....	3.90	+0.25	2.66	-1.39	.....	.....	2.36	-1.22	5.00	+1.10	5.51	+2.01	5.97	+1.95	1.40	-2.90	3.04	-0.99	7.59	+4.00	0.31	-2.84	3.54	-0.36	.....	.....
Philadelphia, Pa.....	1.90	-1.51	2.20	-1.18	5.46	+2.01	2.47	-0.44	2.96	-0.24	2.25	-1.05	5.63	+1.30	3.82	-0.79	3.27	-0.11	6.04	+2.94	0.86	-2.20	2.53	-0.51	39.39	-1.78
<i>The Sea Coast.</i>																										
Asbury Park.....	2.35	-1.39	1.60	-2.23	4.29	-0.01	2.49	-1.18	2.72	-0.99	3.78	-0.02	3.47	-1.78	4.06	-1.08	2.92	-0.32	6.75	+2.97	0.31	-2.96	3.17	-0.47	37.91	-9.46
Atlantic City.....	2.89	-0.51	2.43	-0.84	6.93	+3.20	2.01	-0.98	3.32	+0.32	4.29	+1.26	4.35	+0.57	2.44	-1.86	2.70	-0.35	5.97	+2.67	1.15	-2.08	2.13	-1.61	40.61	-0.21
Cape May City.....	3.28	-0.09	2.80	-0.49	6.96	+3.23	2.54	-0.45	2.39	-0.60	4.03	+0.99	5.81	+2.03	1.41	-2.85	2.06	-0.94	7.51	+4.21	0.30	-2.92	2.43	-1.35	41.52	+0.77
Long Branch.....	3.38	.....	2.27	.....	5.81	.....	2.61	.....																		

Monthly and Annual Mean Temperatures for the Year 1917, with Departures from the Normal.

STATIONS.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.		Annual.	
	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.
<i>The Highlands and Kittatinny Valley.</i>																										
Belvidere.....	^a 28.7	+1.2	26.8	-0.6	^b 37.4	+0.6	49.8	+0.2	52.8	-7.9	69.2	+0.2	73.8	+1.1	73.2	+2.4	60.6	-4.5	^b 50.4	-2.1	39.4	-1.8	21.9	-8.9	48.7	-1.7
Charlotteburg.....	27.2	+0.1	^a 23.2	-3.1	33.0	-1.7	44.4	-2.3	49.1	-8.2	^a 63.8	-1.7	69.6	+0.1	68.2	+0.5	56.3	-6.0	^a 46.8	-3.6	36.4	-4.1	^a 19.8	-10.8	44.8	-3.4
Dover.....	26.9	+0.3	^b 24.4	-1.8	35.0	+0.1	46.6	-0.7	51.6	-7.0	67.4	+0.2	72.4	+1.0	71.9	+2.7	^a 58.2	-4.4	^b 47.3	-3.4	^a 37.0	-3.3	21.2	-8.9	47.7	-2.1
Layton.....	27.0	+3.0	24.0	-0.1	34.8	+0.6	47.0	+0.5	51.2	-6.7	65.2	-1.1	.....	.....	^b 70.7	+2.3	57.2	-4.6	47.4	-2.2	37.0	-1.4	19.8	-7.6	.....	.....
Newton.....	27.5	+1.8	24.4	-1.3	35.1	-0.7	46.8	-0.8	50.9	-8.4	66.9	-0.8	71.5	-0.4	^c 71.6	+1.8	^a 59.5	-4.1	.....	.....	37.4	-2.4	19.0	-10.3	.....	.....
Phillipsburg.....	30.3	+2.4	27.3	-0.5	38.0	+0.1	50.3	+0.7	54.6	-6.7	69.8	+0.1	75.0	+1.0	73.9	+2.2	62.0	-3.4	50.0	-2.9	39.6	-2.0	22.0	-9.3	49.4	-1.5
<i>The Red Sandstone Plain.</i>																										
Bergen Point.....	32.0	+1.8	28.0	-2.4	^b 37.8	0.0	^a 47.6	-0.9	^b 53.8	-5.9	^d 69.4	+0.6	74.0	+0.6	^b 74.6	+2.9	^d 62.7	-4.0	^f 51.0	-3.3	^a 39.6	-3.4	^b 25.4	-7.6	49.7	-1.8
Boonton.....	27.4	.....	23.5	.....	35.4	.....	47.2	.....	52.6	.....	67.8	.....	73.0	.....	72.5	.....	59.4	.....	48.6	.....	37.5	.....	20.6	.....	47.1	.....
Elizabeth.....	31.3	+1.2	28.9	-1.5	38.5	+0.1	49.4	-1.4	54.6	-7.6	70.4	-0.8	75.2	-0.3	75.5	+2.0	62.4	-4.6	51.2	-3.5	40.1	-3.5	24.5	-9.0	50.2	-2.4
Flemington.....	31.2	+1.6	28.6	-1.9	38.8	+1.3	50.1	+1.0	54.6	-5.3	69.8	+0.7	75.0	+1.1	74.8	+3.0	62.5	-2.6	51.6	-2.5	41.0	-1.8	24.6	-7.4	50.2	-1.1
Highwood.....	29.5	+0.6	26.2	-2.5	36.0	-0.2	46.6	-1.9	52.3	-7.4	67.6	-0.7	72.6	+0.1	72.8	+1.6	58.9	-5.3	48.8	-3.9	37.6	-4.7	21.8	-10.6	47.6	-2.9
Jersey City.....	32.7	+1.9	28.9	-2.3	39.0	+0.8	49.7	+0.3	55.0	-6.1	70.4	+0.4	76.4	+1.7	76.9	+3.6	64.0	-3.2	52.6	-3.0	41.4	-2.2	25.3	-8.7	51.0	-1.4
Lambertville.....	33.4	+3.0	30.0	-0.4	40.6	+1.6	50.8	+0.4	^a 55.3	-6.4	70.4	+0.1	75.3	+0.8	75.2	+2.8	62.1	-3.9	51.5	-2.0	.....	.....	.....	.....	.....	.....
Little Falls.....	30.4	.....	26.8	.....	37.3	.....	^a 48.3	.....	^a 53.4	.....	70.1	.....	^b 75.4	.....	^b 75.8	.....	^d 61.4	.....	^c 50.1	.....	38.3	.....	^d 24.2	.....	49.3	.....
Newark.....	32.7	+3.1	27.9	-1.9	39.0	+1.5	49.1	0.0	54.7	-6.1	^c 70.4	+0.7	74.2	-0.1	75.3	+2.7	62.4	-3.5	.....	.....	40.0	-2.9	^b 23.6	-9.4	.....	.....
New Brunswick.....	32.0	+1.5	28.7	-2.6	38.4	+0.2	48.4	-1.3	53.9	-6.7	69.0	-0.6	74.0	-0.3	^a 74.2	+1.8	61.4	-4.6	51.4	-3.2	40.4	-3.2	25.4	-7.7	49.8	-2.2
Palisades Park.....	29.6	.....	26.1	.....	36.5	.....	46.8	.....	52.2	.....	68.4	.....	73.7	.....	73.3	.....	59.8	.....	48.8	.....	38.2	.....	22.0	.....	48.0	.....
Paterson.....	31.5	+2.1	28.4	-1.8	39.0	+0.5	50.2	-0.1	55.2	-6.1	70.5	+0.4	75.5	+1.2	76.1	+4.1	63.2	-3.0	52.3	-2.1	41.4	-1.9	24.8	-8.3	52.3	-1.2
Plainfield.....	31.0	+1.6	28.0	-2.2	38.4	+1.8	49.1	+0.9	54.0	-6.3	69.2	-0.1	74.0	+0.1	73.9	+1.8	61.2	-4.0	.....	.....	.....	.....	.....	.....	.....	.....
Somerville.....	28.9	-0.3	26.8	-3.2	36.4	-0.5	48.1	-0.6	53.0	-7.1	68.2	-1.0	73.2	-0.7	72.8	+0.9	61.0	-4.3	49.8	-3.6	38.5	-3.7	23.7	-8.2	48.4	-2.7
South Orange.....	30.6	+1.9	27.4	-1.6	37.7	+0.9	47.8	-0.5	53.2	-6.8	69.5	+0.7	74.6	+1.5	73.8	+3.1	60.5	-3.6	49.6	-3.3	39.2	-2.4	23.1	-8.9	48.9	-1.6
New York, N. Y.....	32.4	+2.2	27.8	-2.9	38.7	+1.2	47.2	-0.9	53.2	-6.1	68.3	-0.2	74.1	+0.6	74.6	+2.4	63.0	-3.5	52.0	-3.6	41.2	-2.8	25.0	-9.4	49.8	-2.0
<i>The Southern Interior.</i>																										
Bridgeton.....	34.1	+1.1	31.6	-2.3	41.9	+0.8	53.0	+1.2	57.1	-6.8	72.6	-0.8	76.4	-0.7	75.8	+0.7	63.4	-4.8	53.1	-3.6	41.4	-3.5	^a 28.8	-6.8	52.4	-2.1
Burlington.....	33.2	+2.4	30.0	-0.9	39.6	-0.3	51.4	+0.3	56.0	-6.1	71.6	+0.9	76.0	+0.7	75.6	+2.2	63.2	-3.8	52.2	-2.5	41.0	-3.0	26.8	-7.3	51.4	-1.4
Layton.....	33.2	+2.3	31.2	-0.5	40.4	+0.6	51.0	+0.7	55.7	-6.2	71.6	+0.2	76.0	0.0	75.0	+1.5	62.2	-4.5	51.5	-3.6	41.2	-2.2	.....	.....	.....	.....
Lightstown.....	32.0	+1.1	.....	.....	^b 39.2	+0.2	^b 49.0	-0.8	54.7	-6.4	^b 70.9	+1.5	.....	.....	^b 75.4	+3.5	61.8	-4.8	^a 50.2	-3.5	^a 38.5	-5.1	25.8	-7.8	.....	.....
Maystown.....	^b 30.4	-1.3	27.7	-3.2	^f 39.6	-0.1	^b 47.4	-3.2	.....	.....	.....	.....	.....	.....	.....	^a 59.6	-7.1	^f 50.2	-4.7	^a 39.6	-4.7	25.2	-9.4	.....	.....	
Indian Mills.....	32.4	+1.0	29.8	-2.3	39.0	-0.8	50.2	-0.1	54.6	-7.4	70.0	-1.0	74.4	-0.7	73.4	+0.3	61.4	-4.7	50.8	-3.6	39.8	-3.6	26.6	-7.4	50.2	-2.5
Lakewood.....	31.8	-0.3	28.6	-1.2	37.8	-2.2	47.6	-2.1	53.6	-6.9	69.2	+1.6	74.1	+1.2	72.4	+1.7	59.6	-5.8	49.4	-5.9	38.6	-4.6	26.6	-7.2	49.1	-2.6
Moorestown.....	33.8	+3.7	31.1	+0.1	40.7	+1.9	52.0	+2.0	56.0	-5.1	71.0	+0.8	75.4	+0.6	75.0	+2.5	62.4	-3.6	51.8	-2.4	41.3	-1.7	^a 27.3	-6.0	51.5	-0.6
Trenton.....	32.4	+1.9	28.5	-2.2	39.2	+0.1	49.1	-0.7	54.6	-6.5	70.5	+1.0	75.1	+0.6	74.8	+1.8	62.0	-4.9	51.6	-4.0	40.6	-3.8	24.7	-9.7	50.3	-2.2
Tuckerton.....	33.3	+1.6	30.4	-1.7	39.2	+0.2	49.0	+1.1	54.0	-5.7	69.3	+0.3	75.4	+1.3	74.6	+2.4	62.1	-3.9	51.8	-3.0	40.4	-3.6	28.4	-9.1	50.7	-1.4
Wineland.....	^a 33.6	+1.6	^b 28.9	-3.6	.....	.....	^a 52.7	+2.0	56.5	-5.7	^a 71.6	0.0	76.3	-0.1	^c 75.2	+1.6	63.8	-3.1	52.8	-2.6	^a 42.0	-1.9	29.0	-5.4	.....	.....
Woodbine.....	34.0	+1.6	32.3	-0.3	41.1	+1.0	50.8	+1.3	56.2	-4.2	70.8	+1.8	76.2	+2.3	74.1	+1.9	63.4	-2.9	52.5	-3.1	40.9	-3.1	^b 28.8	-6.2	51.8	-0.8
Philadelphia, Pa.....	35.2	+3.4	31.4	-1.4	42.0	+2.0	52.3	+1.5	57.2	-5.0	72.2	+1.0	76.4	+0.6	76.7	+2.9	64.4	-3.0	53.8	-2.5	43.4	-1.5	28.0	-7.7	53.5	-0.8
<i>The Sea Coast.</i>																										
Asbury Park.....	32.2	+0.8	28.6	-3.3	38.0	-0.3	45.7	-2.4	51.9	-6.8	64.0	-4.2	71.3	-1.6	71.8	-0.1	62.6	-4.3	50.8	-4.8	41.2	-3.0	^c 27.3	-7.2	48.8	-3.1
Atlantic City.....	35.2	+2.7	30.4	-2.6	40.0	+1.2	48.2	+0.6	54.8	-2.7	66.4	-0.4	73.1	+0.6	74.5	+1.9	63.1	-4.5	52.8	-4.6	41.8	-2.7	29.0	-7.4	50.8	-1.6
Cape May City.....	34.8	+0.7	31.2	-2.9	40.2	-0.6	48.9	+0.5	56.3	-2.3	66.2	-1.5	73.2	-0.2	74.2	+0.8	63.6	-5.4	53.7	-5.9	43.2	-4.2	29.3	-8.7	51.2	-2.5
Long Branch.....	31.2	.....	27.8	.....	37.1	.....	46.0	.....	53.7	.....	^a 64.0	.....	72.0	.....	.....	.....	61.8	.....	49.9	.....	38.8	.....	26.5	.....	.....	.....
Sandy Hook.....	32.4	+2.7	27.8	-2.9	37.8	+1.1	46.2	-0.5	52.6	-6.2	67.2	-1.2	73.3	-0.6	74.4	+1.7	63.6	-3.8	52.6	-4.1	41.8	-2.7	2.65	-8.1	49.7	-2.0

Letters of alphabet denote number of days missing.

Monthly Maximum Temperatures for the Year 1917, with Dates.

STATIONS.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.	
	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.
<i>The Highlands and Kittatinny Valley.</i>																								
Belvidere.....	49	5	52	27	68	31	82	1†	84	20	88	22	98	31	96	2	82	2†	76	3	66	10	49	1
Charlotteburg.....	50	14	48 ^a	18†	60	31	78	1†	78	20	82	19	94	30†	89	1†	81	19	70	19	65	6	51	2†
Dover.....	51	14	52	26†	66	31	81	1†	83	20	88	22	96	31	96	1†	80	19†	71	19	63	6	46	2†
Layton.....	51	14	50	27	57	26	85	1	82	20	84	19	99	31	94 ^b	2	79	2	69	4†	66	18	45	1†
Newton.....	51	14	52	27	64	31	80	1	80	20	84	22	94	31	91	2	80	2	.....	.....	63	6	43	1
Phillipsburg.....	52	14	52	27	68	31	82	1	86	20	89	19†	99	31	97	2	84	2	73	19	65	6	45	1
<i>The Red Sandstone Plain.</i>																								
Bergen Point.....	52	14	52	27	63	31	83	1	87	20	89	22	99	31	96	1	85	2	75	5	66	18	44	1†
Boonton.....	53	14	52	27	62	31	80	1	84	20	88	21†	98	31	98	1	87	19	74	5†	65	18	48	1
Elizabeth.....	53	14	55	27	69	31	85	1	87	20	92	22	104	31	103	1	87	20	78	5	66	15	47	1
Flemington.....	53	14	53	26†	69	31	83	1	87	20	89	22	102	31	97	2	85	20	78	19	66	6†	49	1
Highwood.....	50	14	49	27	61	31	88	1	84	20	86	22	98	31	96	1	79	27	71	4†	64	6	46	1
Jersey City.....	49	7†	51	27	64	31	84	1	87	20	90	22	101	31	97	1†	85	20	74	4†	62	10†	46	1
Lambertville.....	53	14	53	26†	68	31	81	1	84	20	88	22	98	31	96	2	80	2†	74	5	62	6†	46	1
Little Falls.....	53	14	52	27	64	31	82	1	83	20	95	24	98	31	99	1	81	2†	72	5†	62	6†	46	1†
Newark.....	52	14	53	27	64	31	85	1	86	20	87	22	100	31	99	1	82	3	72	5	62	15†	45	1
New Brunswick.....	54	14	56	27	69	31	83	1	86	20	88	22	98	31	97	1	82	20	77	5	64	18	46	1
Palisades Park.....	51	5†	50	27	61	31	83	1	84	20	89	22	100	31	99	1	83	20	73	4	65	6	45	2†
Paterson.....	50	14	52	27	64	31	85	1†	87	20	91	22	101	31	100	1†	85	19†	75	4	67	6†	46	1†
Plainfield.....	54	14	54	27	69	31	83	1	87	20	88	22	98	31	97	1†	82	20	76	19	64	10†	48	1
Somerville.....	53	14	53	26	70	31	83	1	85	20	89	22	99	31	97	1†	84	20	77	19	65	6	47	1
South Orange.....	52	14	52	27	66	31	81	1	83	20	87	22	98	31	97	1	80	20	72	19	62	18	48	1
New York, N. Y.....	52	5	55	27	64	31	79	1	82	20	87	22	98	31	98	1	83	20	74	5	63	15	46	1
<i>The Southern Interior.</i>																								
Bridgeton.....	55	5†	60	26†	70	31	85	21	87	20	94	27	101	31	100	2	87	21	82	5	68	10	50	1†
Burlington.....	54	5†	59	26	72	31	83	1	87	20	90	14	100	31	96	2	83	21	79	5	65	10†	48	1†
Clayton.....	55	6	62	26	70	31	85 ^a	21	87	20	93	27	100	31	97	2	83	21	80	5	66	18	47	1
Hightstown.....	54	6	57	26†	70	31	81 ^b	1	87	20	89	22	99	31	97	1	83	19†	79	5	62	6†	47	1†
Inlaystown.....	55	14	58	26†	70	31	80	1†	.....	.....	.....	.....	.....	.....	.....	.....	80	19	70 ^c	4†	63 ^b	15	50	2†
Indian Mills.....	56	14	59	26	70	31	84	1†	88	20	92	27	101	31	99	2	86	20	84	5	67	18	49	1
Lakewood.....	55	9	60	26	69	31	81	1	87	20	89	27†	98	31	97	1†	79	20†	77	5	64	18	52	2†
Moorestown.....	55	6†	61	26	72	31	83	1†	87	20	90	27	98	31	95	2	79	2†	78	5	65	6†	49	2
Trenton.....	55	14	59	26	69	31	80	1	85	20	88	22	98	31	95	1	81	19	79	5	65	18	47	1
Tuckerton.....	58	22	58	27	62	11	85	1	90	20	95	27	103	31	101	1	86	21	78	4†	68	18	50	1†
Vineland.....	56	22	59	27	.....	.....	85	21	87	20	93	27	100	31	97	2	85	21	81	5	67	10†	49	1†
Woodbine.....	56	6†	60	26	70	31	84	21	86	20	92	27	98	31	96	1†	82	21	80	5	64	10†	51	9
Philadelphia, Pa.....	56	5	60	26	69	31	81	1	86	20	90	27	101	31	96	2	82	20	78	5	65	6	50	8
<i>The Sea Coast.</i>																								
Asbury Park.....	54	14†	59	26	60	31	83	1	86	20	87	27	100	31	93	1	82	20	74	4	62	49	49	1
Atlantic City.....	58	22	59	27	62	12	72	1	87	20	92	24	99	31	92	1	83	21	75	4	65	18	54	8
Cape May City.....	54	22	57	27	58	12	71	22	88	20	92	24	98	31	91	1	81	21	77	4	64	10	50	8
Long Branch.....	57	14	60	26	65	31	83	1	90	20	89	27	99	31	94	1	81	20	73	4	64	18	49	1
Sandy Hook.....	50	14	52	26	60	31	77	1	79	20	83	24	98	31	94	2	80	20	70	4	59	18	49	1

† On other dates also.

Letters of alphabet denote number of days missing.

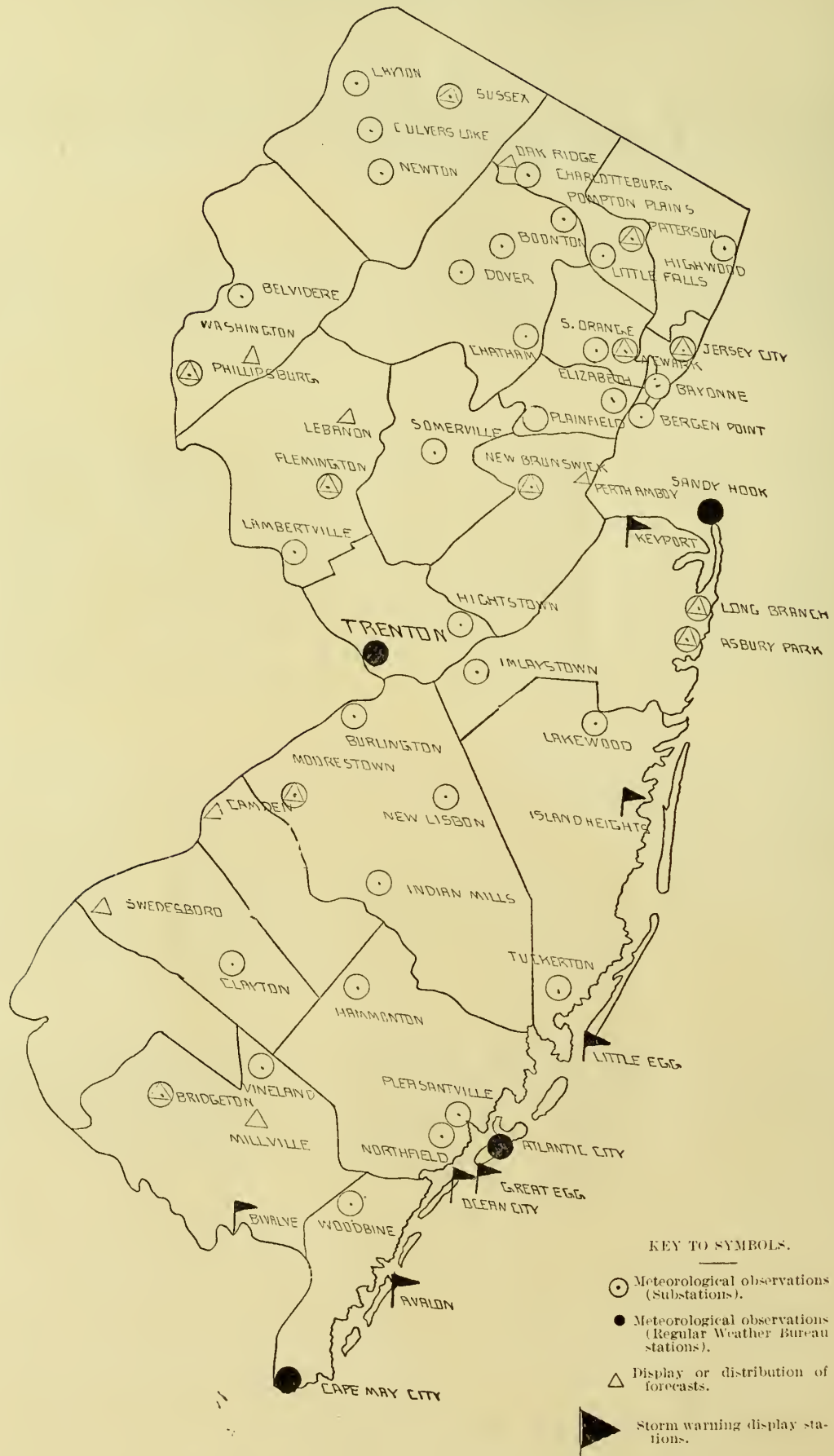
Monthly Minimum Temperatures for the Year 1917, with Dates.

STATIONS.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.	
	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.
<i>The Hightown and K&L Valley.</i>																								
Belvidere.....	5	12	-3	13	6	7	26	10	28	4	49	5	53	1	49	26	33	11	25	31	16	26†	-14	32
Charlotteburg.....	2	12†	-5	13	3	7	24	10	26	4	40	5	48	1†	44	26	27	11	22	21	13	27	-19	30
Culvers Lake.....	-6	12	-17	13	1	7	15	10	22	4	42	17	49	1†	41	26	25	11	17	31	2	26	-29	31
Dover.....	4	11†	-4	13	5	7	23	10	27	4	46	18	51	1	48	26	32	11	25	31	15	27	-14	30
Layton.....	0	27	-7	13	0	7	24	4	25	4	42	18	46	1	44	26	29	11	23	21	14	26†	-18	31
Newton.....	2	12	-8	3	11	7	21	10	31	4	48	17†	56	6†	49	26	32	11	27	31	9	25	-19	30
Phillipsburg.....	5	12	-2	13	8	7	26	10	31	4	47	17†	57	5†	49	26	35	11	27	31	17	27	-12	32
<i>The Red Sandstone Plain.</i>																								
Bergen Point.....	7	12	-1	13	16	7	25	9	37	6	50†	5	56	1	52	26	40	11†	30	31	18	27	-14	30
Boonton.....	5	12†	-3	13	5	7	25	9	27	4	44	5	50	1	42	26	31	11†	22	23	15	27	-21	30
Elizabeth.....	7	12	-1	13	11	7	26	9	31	4	47	18	54	1	49	26	34	11	27	21†	16	27	-15	30
Flemington.....	7	12	0	13	7	7	26	9	30	4	47	18	54	1	50	26	35	11	28	31	17	27	-8	30
Highwood.....	7	12	-2	13	8	7	26	9†	28	4	47	18	53	1	49	26	33	11	26	21	15	27	-15	30
Jersey City.....	8	12	2	13	19	6	27	9	38	4	52	1	59	11	56	26	41	11	31	31	19	27	-12	30
Lambertville.....	9	12	1	13	14	7	28	9†	34	4	50	18	57	1	53	26	39	11	30	31	19	27	-12	30
Little Falls.....	9	11	1	3†	11	7	26	30	3	49	18	51	8	49	26	39	11	28	21	16	25†	-10	31	
Newark.....	9	12	1	13	18	6†	27	9	39	2†	54†	18	62	8	54	26	45	11†	31	31	18	27	-13	30
New Brunswick.....	7	12	-1	13	17	6†	24	9†	32	4	48	5	51	1	49	26	36	11	28	31	17	27	-15	30
Palisades Park.....	7	12	-2	13	12	7	26	9	30	4	48	18	53	1	48	26	32	11	28	31	17	27	-15	30
Paterson.....	7	12	0	13	17	7	27	9	34	4	51	5†	56	1	53	26	38	11	29	31	18	27	-13	30
Plainfield.....	7	12	0	13	11	7	26	9	31	4	47	18	53	1	49	26	35	11	27	31	17	27	-14	30
Monerville.....	5	12	-2	13	3	7	24	9†	27	4	43	18	50	1	46	26	32	11	25	31	11	28	-18	31
South Orange.....	7	12	0	13	15	7	26	9†	33	4	52	1†	55	1	50	26†	38	11	29	31	18	27	-14	30
New York, N. Y.....	7	12	0	13	18	6	25	9	38	6	53	1	58	11	56	26	43	11	29	31	18	27	-13	30
<i>The Southern Interior.</i>																								
Bridgeton.....	10	12	0	13	20	6	26	9	36	6	51	17	60	11	52	26	39	11†	26	31	16	27	-5	30
Burlington.....	9	12	0	13	11	7	26	9†	35	4	50	18	57	12	52	26	39	11	29	31	19	27	-7	30
Layton.....	9	12	0	13	18	6†	24	10	35	4†	46	5	57	12	49	26	36	11	26	31	21	25†	-6	30
Lightstown.....	8	12	-2	13	16	6	25	9	31	4	46	18	55†	1	49	26	36	11	27	31	17	27	-12	30
Maylown.....	4	12	-4	13	22	7	22	9	32	4	42	5	54	12	45	26	36	11	26	31	16	26†	-14	30
Indian Mills.....	6	12†	-3	13	12	7	24	9†	32	4	42	5	54	12	45	26	34	11	25	31	10	27	-10	30
Lakewood.....	5	13	-1	13	11	7	26	10	29	4	44	5	55	6†	47	26	34	12	28	14†	16	26	-11	30
Moorestown.....	9	12	0	13	17	7	26	9	36	6	52	17	58	12	52	26	41	12	28	31	15	27	-8	30
Monton.....	8	12	0	13	18	6	25	9	38	4	52	17	59	12	53	26	40	11	29	31	19	27	-7	30
Rockerton.....	8	12	-2	13	12	7	25	10†	31	4	44	5	57	12†	45	26	35	12	25	31	10	27	-8	30
Shelton.....	10	12	1	13	27	7	27	9	36	12	51	5	59	12	51	26	39	11	26	31	19	26†	-5	30
Woodbine.....	10	12	-1	13	19	7	26	10	35	9	48	5	60	7†	53	19	37	12	26	31	12	27	-6	30
Philadelphia, Pa.....	12	12	3	13	22	6	28	9	41	6	54	17	60	12	58	26	43	11	32	31	23	27	-4	30
<i>The Sea Coast.</i>																								
Asbury Park.....	7	12	-1	13	18	6	26	9†	37	4	52	1†	57	12	55	26	44	11	29	31	19	25†	-9	30
Atlantic City.....	10	12	1	13	22	6	27	10	38	9	54	17	60	2	55	26	44	11	29	31	18	27	-5	30
Cape May City.....	14	12	4	13	24	6	28	9	38	9	55	5	61	3	56	26	42	11	32	31	21	27	-2	30
Long Branch.....	6	12	0	13	17	6	26	10	37	4	48	5	57	12	52	26	42	12	29	31	17	27	-8	30
Mary Hook.....	10	12	4	13	20	6	28	9	41	2	53	1	60	3	59	26	49	11	33	31	21	27	-5	30

† On other dates also.

Letters of alphabet denote number of days missing.

OBSERVATION AND FORECAST DISPLAY STATIONS.





REGULAR, SPECIAL, AND COOPERATIVE STATIONS AND OBSERVERS.*

Stations.	Observers.	Stations.	Observers.	Stations.	Observers.
Asbury Park.....	Willbur H. Pancoast.	Highwood.....	Charles J. Bates.	Plainfield.....	John Neagle.
Atlantic City.....	U. S. Weather Bureau.	Imlaystown.....	F. B. Jones.	Pleasantville.....	Lincoln Van Gilder.
Belvidere.....	Samuel J. Hixson.	Indian Mills.....	James M. Armstrong.	Pompton Plains.....	M. S. Taylor.
Bergen Point.....	Wm. H. Mitchell, D. D. S.	Jersey City.....	Samuel K. Pearson, Jr.	Sandy Hook.....	U. S. Weather Bureau.
Bouton.....	J. W. Demmers.	Lakewood.....	Richard W. Holman.	Somerville.....	A. A. Macdonald.
Bridgeton.....	Henry A. Jorden.	Lambertville.....	Samuel W. Cochran.	South Orange.....	Wm. J. Chandler, M. D.
Burlington.....	D. S. B. McCoy.	Layton.....	A. M. Depue.	Sussex.....	W. W. Tittsworth.
Cape May City.....	U. S. Weather Bureau.	Little Falls.....	Montclair Water Co.	Trenton.....	U. S. Weather Bureau.
Charlotteburg.....	George S. Briggs.	Long Branch.....	Wm. D. Martin, Jr.	Tuckerton.....	Frank R. Austin.
Chatham.....	Paul Molitor.	Moorestown.....	Geo. L. Gillingham.	Vineland.....	H. C. Himes.
Clayton.....	W. Rex B. Sutch.	Newark.....	William Wiener.	Woodbine.....	Baron de Hirsch Agric'l School.
Culvers Lake.....	Brice E. Riker.	New Brunswick.....	N. J. Experiment Station.		
Dover.....	Wm. C. Harris.	Newton.....	Irving G. Kern.		
Elizabeth.....	L. B. Bonnett.	Northfield.....	Wm. L. Flick.		
Flemington.....	Hiram E. Deats.	Palisades Park.....	George P. Kirsten.		
Hammononton.....	G. H. Parkhurst.	Paterson.....	Marion T. Probert.		
Hightstown.....	G. Franklin Elridge.	Phillipsburg.....	D. Wilson Smith.		

CRANBERRY MARSH STATION.

New Lisbon..... Joseph Haines.

* At the end of the year, 1917.

FORECASTS, WARNINGS, AND DISTRIBUTING CENTERS.

WEATHER AND TEMPERATURE FLAGS.		SPECIAL WARNINGS.	
Stations	Displaymen	Place	Distributor
Asbury Park.....	Asbury Park Publicity Bureau	Atlantic City.....	U. S. Weather Bureau
Atlantic City.....	Manager, Preston Building	Bordentown.....	Delaware & Atlantic Tel. & Tel. Co.
do. (in summer only).....	Seaside Yacht Club	Bridgeton.....	Henry A. Jorden
Bridgeton.....	Henry A. Jorden	Cape May City.....	U. S. Weather Bureau
Cape May City.....	U. S. Weather Bureau	Freehold.....	J. A. Yard
Island Heights (in summer only).....	Island Heights Yacht Club	Jersey City.....	Union Trust Co. of New Jersey
Jersey City.....	Union Trust Co. of New Jersey	Long Branch.....	William D. Martin
Long Branch (cold wave warnings).....	William D. Martin	Matawan.....	Postmaster
Newark.....	Central High School	Millville.....	Delaware & Atlantic Tel. & Tel. Co.
do.....	State Normal School	Mount Holly.....	do.
Princeton.....	First National Bank	Newark.....	William Wiener
Trenton (cold wave warnings).....	U. S. Weather Bureau	Paterson.....	Public Library

FORECAST DISTRIBUTING CENTERS.

Figures following the name of town indicate the number of forecast cards distributed daily, by mail, to points in New Jersey.

Atlantic City—200.....	U. S. Weather Bureau
Cape May City—50.....	do.
Matawan—192.....	Postmaster
Newark—229.....	William Wiener
New York, N. Y.—426.....	U. S. Weather Bureau
Oak Ridge—R. F. D. Service—95.....	Postmaster
Philadelphia, Pa.—212.....	U. S. Weather Bureau
Phillipsburg—98.....	Postmaster
Sandy Hook—20.....	U. S. Weather Bureau
Somerville—112.....	Postmaster
Trenton—335.....	U. S. Weather Bureau
Washington, N. J.—R. F. D. Service—50.....	Postmaster

FORECASTS BY TELEPHONE.

Forecasts are available each business day after 10:30 a. m. to all telephone stations within the State, in most instances without payment of toll. Special forecast distributors by telephone are:

Camp, Dix.....	Division Signal Officer
Hammononton.....	Hammononton Tel. & Tel. Co.
Paterson.....	Public Library
Perth Amboy.....	do.
Sussex.....	Farmers' Union Tel. Co.
Swedesboro.....	Peoples Rural Tel. Co.

Place	Distributor
Belle Plain.....	E. H. Durell
Bordentown.....	S. F. Garrison
Collingswood.....	F. F. Collings
Cream Ridge.....	Isaac Harrison
Hammononton.....	A. J. Rider
Jamesburg.....	John W. Vohman
Laurel Springs.....	Miss Sarah F. Collings
Mays Landing.....	C. D. Makepeace
Medford.....	Evans & Wills
New Lisbon.....	J. J. White
Pemberton.....	Theo. H. Budd
Toms River.....	Geo. H. Holman
Vineentown.....	Ethelbert Haines

STORM WARNING DISPLAY STATIONS.

Atlantic City	Great Egg	Long Branch
Avalon	Island Heights	Ocean City
Bivalve	Keyport	Sandy Hook
Cape May Point	Little Egg	

U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU
CHARLES F. MARVIN, CHIEF

UNIVERSITY OF MICHIGAN LIBRARY
FEB 25 1918

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

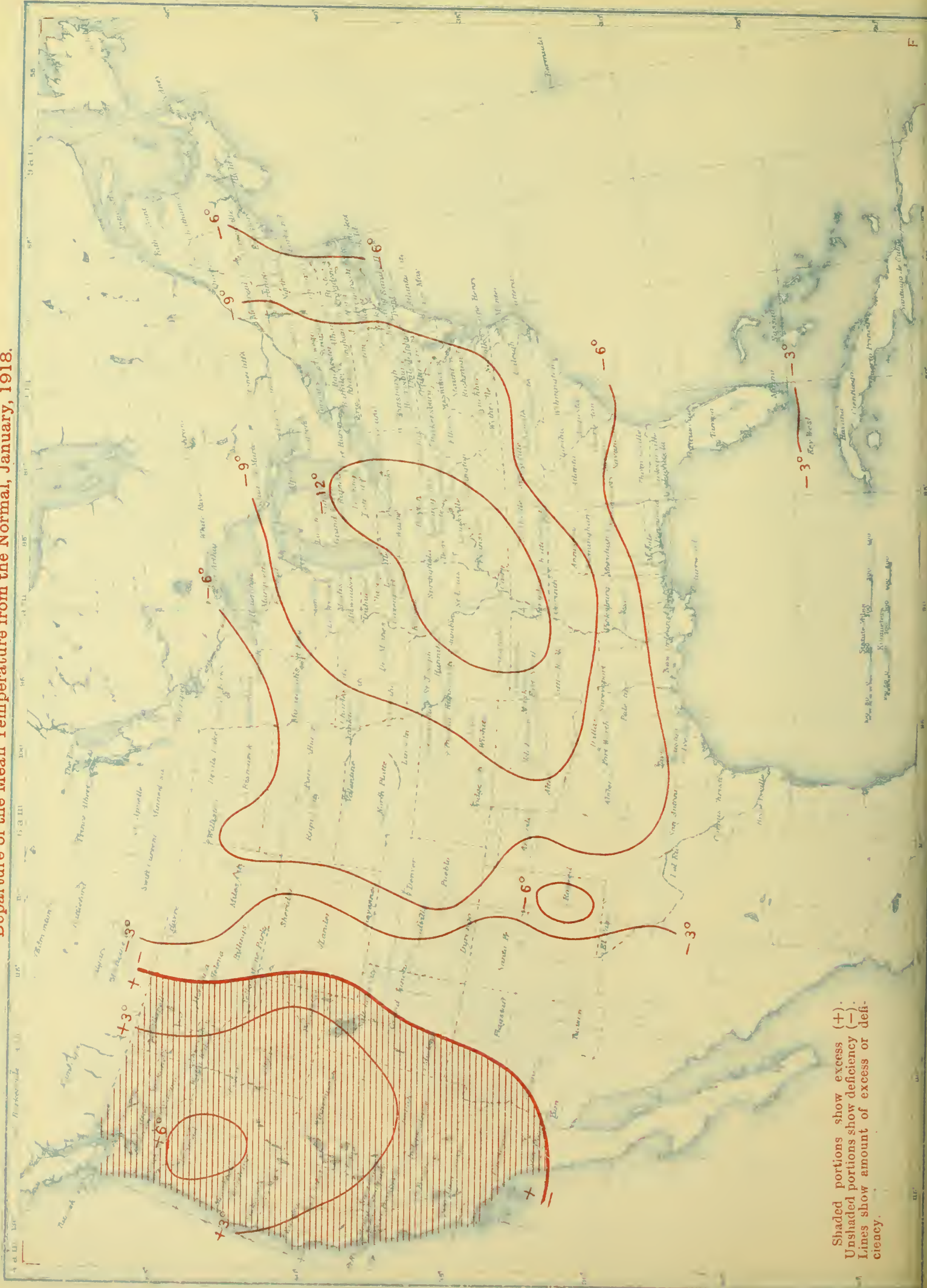
JANUARY, 1918.

BY
G. HAROLD NOYES
METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
FEBRUARY 19 1918.

Departure of the Mean Temperature from the Normal, January, 1918.



Shaded portions show excess (+).
Unshaded portions show deficiency (-).
Lines show amount of excess or deficiency.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

VOL. XXXI. TRENTON, N. J., JANUARY, 1918. No. 1.

GENERAL SUMMARY.

With the close of January, 1918, a period of remarkably continuous low temperature had occurred. October and November, just passed, broke the records in several portions of the State for cold weather in their respective months, and December and January have been colder than any previous records in New Jersey. The January normal temperature, 2° under freezing, was just sufficiently cold to maintain a continuously frozen ground surface, to the depth of a few inches in the southern counties, and somewhat deeper to the northward. The last of December and the first of January this year brought record-breaking, below zero temperatures, 20° to nearly 30° below normal for a week. The frost entered the ground to depths never before known, ice in streams, ponds and harbors froze to remarkable thicknesses. The ice in the Delaware at Trenton was 20 inches thick, and automobiles crossed the river at Burlington on the ice instead of by ferry. Vegetables and produce, in storage heretofore considered safe, were frozen, and the amount of damage therefrom remained unknown at the close of the month. Great damage was also caused from frozen water pipes both in-doors and in the ground, and scanty reserves of fuel supply were early exhausted, entailing a further great loss. The only days that were even slightly warmer than normal were the 7th, 12th, 15th and 17th, and, in the southern counties, the 25th. The 12th was remarkable for the change in temperature: just before daybreak the thermometer was something over 50°, and by midnight had fallen to below 20°. Snowfall was frequent, and the accumulated depth was much greater than normal. In the northern half of the State, snow covered the ground December 8th, and weighing in the country was continuous thereafter. In the southern half of the State there was little or no snow on the ground from the 6th to the 18th. Rain fell on the 7th and on the night of the 11th-12th, all other precipitation was snow, except for a few unimportant occurrences of sleet. Remarkably low pressure occurred on the 15th, the lowest reading being 28.81 inches at Sandy Hook.

The mean stage of the Delaware River at Phillipsburg was 1.5 feet, the highest being 2.2 feet on the 12th. At Trenton the mean daily stage was 1.3 feet, or 2.6 feet below normal, the highest being 2.3 feet on the 16th.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 37 stations was 20.3°, which was 9.6° below normal. The highest temperature was 56° at Clayton and Mooresville on the 12, and the lowest, -24° at Culvers Lake on the 19th. The greatest daily range of temperature was 41° at Phillipsburg on the 12th. The highest mean temperature reported was 25.6° at Cape May City, and the lowest, 15.5° at Layton. The deficiency in temperature ranged from 8° to 12°.

PRECIPITATION.

The average total precipitation of the State, as deduced from observations of 40 stations was 4.14 inches, which was 0.35 inch above normal. The average total snowfall was 18.9 inches, which was 10.2 inches above normal. The greatest monthly amount of precipitation was 6.14 inches at Clayton, and the least, 2.78 inches at South Orange. The greatest precipitation in 24 consecutive hours was 3.23 inches at Clayton on the 15th. The greatest monthly total snowfall was 27 inches at Indian Mills. The average number of days on which 0.01 inch or more precipitation occurred was 11, which was normal.

WIND.

The prevailing wind direction was from the northwest, with an approximate velocity of 15 miles per hour. The highest velocity, sustained for 5 consecutive minutes, was 79 miles per hour from the south east on the 12th.

SUNSHINE AND CLOUDINESS.

The average number of clear days throughout the State was 12, which was 2 more than normal; partly cloudy, 8, or 1 less than normal; cloudy, 11, or 1 less than normal. The approximate percent. of possible sunshine was 48, or about normal.

MISCELLANEOUS.

Atmospheric pressure, reduced to sea level was 29.92 inches, which was 0.19 inch below normal. Thunder storms occurred on the 7th and 12th. Sleet or ice storms were reported on the 7th, 11th, 12th, 15th, 28th and 29th. Solar halos were observed on the 11th and 30th; and lunar halos on the 21st and 24th. Dense fog occurred on the 6th and 7th. Storming warnings were displayed along the coast on 13 days.

COMPARATIVE DATA FOR JANUARY.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more prec.
1885.....	30.8	67	0	4.08	5.41	3.33	.....	.....	.....	.....
1886.....	27.3	60	-10	4.47	5.59	3.08	.....	.....	.....	.....
1887.....	28.4	67	-6	3.86	6.65	2.00	.....	.....	.....	.....
1888.....	25.4	59	-12	4.77	6.74	2.80	.....	.....	.....	.....
1889.....	36.2	60	8	5.68	8.78	3.84	.....	.....	.....	.....
1890.....	41.3	78	12	2.29	3.22	1.05	.....	.....	.....	.....
1891.....	34.2	59	10	6.57	10.55	4.41	10	11	10	10
1892.....	29.9	67	-6	5.13	7.05	2.50	10	9	12	10
1893.....	21.6	54	-21	3.04	4.56	1.87	10	10	11	9
1894.....	34.2	61	-4	2.34	3.80	1.18	10	8	13	11
1895.....	28.1	64	-4	4.66	5.80	2.48	10	10	11	11
1896.....	28.6	61	-7	1.66	2.87	0.68	12	10	9	5
1897.....	29.0	64	-6	2.80	4.21	1.70	11	8	12	9
1898.....	32.6	64	-10	4.20	5.90	2.79	9	11	11	11
1899.....	30.1	60	-21	4.01	5.73	2.40	13	8	10	11
1900.....	32.4	64	-5	3.85	5.50	2.37	11	11	9	10
1901.....	30.4	63	-6	2.52	4.00	1.35	11	11	9	9
1902.....	28.4	58	-5	3.28	4.35	2.52	12	9	10	10
1903.....	30.4	57	-5	3.90	5.04	2.31	10	10	11	10
1904.....	23.3	58	-34	3.09	4.67	1.34	13	7	11	10
1905.....	27.0	60	-16	4.18	7.13	2.68	12	9	10	9
1906.....	36.5	74	-5	2.85	3.86	2.08	11	9	11	11
1907.....	31.8	71	-19	3.50	5.80	1.93	8	9	14	14
1908.....	31.8	60	-6	3.74	5.22	2.29	12	11	8	9
1909.....	33.2	69	-12	3.18	4.13	2.18	8	9	14	12
1910.....	29.7	54	-15	5.04	6.65	3.66	8	8	15	15
1911.....	33.5	63	0	3.44	5.34	1.97	10	7	14	14
1912.....	22.3	58	-32	2.82	4.62	1.73	8	12	11	13
1913.....	35.9	68	10	3.58	4.71	2.63	11	7	13	14
1914.....	31.9	73	-18	3.85	6.15	1.95	9	8	14	9
1915.....	33.5	61	-5	6.55	8.92	4.40	11	6	14	12
1916.....	35.1	74	-8	1.60	2.96	0.92	11	8	12	11
1917.....	31.4	58	-6	3.26	4.52	2.35	10	8	13	13
1918.....	20.3	56	-24	4.14	6.14	2.78	12	8	11	11

Climatological data for January, 1918.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.			Prevailing direction of wind.	Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation .01 in. or more.	Clear.			Pt. cloudy.	Cloudy.
The Highlands and Kittatinny Valley.																				
Belvidere.....	Warren.....	289	26	17.7	-9.8	47	12	-8	1	26	4.93	+1.18	1.96	13.5	8	12	7	12	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	25	15.6	-11.5	47	12	-15	2	32	4.01	-0.35	1.95	.....	7	17	13	1	w.	George S. Briggs.
Culvers Lake†.....	Sussex.....	848	16	.....	.....	.....	.....	-24	1	.....	3.76	+0.58	1.47	21.5	10	17	7	7	e.	Brice E. Riker.
Dover.....	Morris.....	600	33	17.4	-9.2	49	12	-12	1	35	4.85	+0.36	1.73	20.5	11	4	15	12	.....	William C. Harris.
Layton.....	Sussex.....	480	17	15.5	-8.5	48	12	-14	1	34	4.39	+0.89	2.26	20.9	8	15	1	15	ne.	A. M. Depue.
Newton.....	Sussex.....	769	36	15.8 ^a	-9.9	48	12	-13	1	26	3.52	+0.02	1.25	19.2	9	13	8	10	nw.	Irving G. Kern.
Phillipsburg.....	Warren.....	363	35	18.2	-9.7	52	12	-4	4	41	4.31	+0.66	1.76	18.3	14	13	6	12	w.	D. Wilson Smith.
Sussex.....	Sussex.....	442	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. W. Tittsworth.
Means and extremes...	.....	.....	.....	16.7	-9.8	52	12	-24	1	41	4.25	+0.48	2.26	19.0	10	13	8	10	w.	.....
The Red Sandstone Plain.																				
Bergen Point†.....	Hudson.....	37	20	20.4	-9.8	50	12	-5	1	28	3.80	-0.62	1.29	15.5	8	6	13	12	nw.	William H. Mitchell.
Boonton.....	Morris.....	400	27	17.2	.....	50	12	-13	1	32	.....	.....	.....	.....	12	22	2	7	sw.	J. W. Demmers.
Chatham.....	Morris.....	330	15	.....	.....	.....	.....	.....	.....	.....	3.60	-0.29	1.38	.....	13	14	11	6	.....	Paul Molitor.
Elizabeth.....	Union.....	45	38	20.4	-9.7	51	12	-10	2	27	3.74	-0.36	1.10	16.5	9	10	10	11	nw.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	29	20.4	-9.2	50	12	-6	20	28	4.42	+0.95	1.35	22.0	10	15	7	9	w.	Hiram E. Deats.
Highwood.....	Bergen.....	90	28	18.5	-10.4	48	12	-15	2	28	3.77	-0.30	1.35	13.6	9	7	13	11	nw.	Charles J. Bates.
Jersey City.....	Hudson.....	10	18	21.8	-9.0	51	12	-4	1	28	3.82	-0.04	1.12	16.1	10	11	8	12	w.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	30	19.0 ^b	-11.4	50	12	.....	.....	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	Thomas R. Hunt.
Little Falls.....	Passaic.....	180	14	17.6	.....	49	12	-10	2	33	4.01	-0.21	1.59	16.8	11	18	4	9	w.	Montclair Water Co.
Newark.....	Essex.....	159	75	20.4	-9.2	51	12	-5	1	29	3.56	-0.20	0.89	16.3	12	10	7	14	w.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	110	64	20.2	-10.3	54	12	-7	1	30	3.01	-0.80	0.89	16.7	11	11	11	9	w.	N. J. Experiment Station.
Palisades Park.....	Bergen.....	80	2	18.8	.....	49	12	-12	2	32	4.07	.....	1.40	18.8	11	10	8	13	n.	George P. Kirsten.
Paterson.....	Passaic.....	80	46	21.2	-8.2	48	12	-6	1	24	3.75	-0.31	1.69	11.2	7	8	5	18	nw.	Marion T. Probert.
Plainfield.....	Union.....	100	31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	John Neagle.
Pompton Plains.....	Morris.....	195	15	.....	.....	.....	.....	.....	.....	.....	4.09	-0.30	1.43	17.5	11	.....	.....	.....	.....	M. S. Taylor
Somerville.....	Somerset.....	60	35	19.0	-10.2	50	12	-13	20	35	3.36	-0.12	0.97	13.7	10	8	11	12	nw.	A. A. Macdonald.
South Orange.....	Essex.....	200	47	19.9	-8.8	49	12	-6	1	30	2.78	-1.36	1.31	16.2	10	11	9	11	w.	Dr. W. J. Chandler.
New York, N. Y.....	.....	365	47	21.6	-8.6	50	12	-5	1	34	3.41	-0.38	1.16	13.6	11	8	10	13	nw.	U. S. Weather Bureau.
Means and extremes...	.....	.....	.....	19.6	-9.7	54	12	-15	2	35	3.70	-0.30	1.69	16.2	10	12	8	11	w.	.....
The Southern Interior.																				
Bridgeton.....	Cumberland.....	30	36	23.2	-9.8	.....	.....	3	1	.....	4.21	+0.47	1.22	25.0	9	13	4	14	nw.	Henry A. Jorden.
Burlington.....	Burlington.....	12	31	21.8	-9.0	52	12	-3	20	24	3.82	+0.28	0.83	21.4	12	14	7	10	nw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	25	21.8	-9.1	56	12	-7	20	33	6.14	+2.38	3.23	24.8	10	12	6	13	ne.	W. Rex B. Sutch.
Hammonton.....	Atlantic.....	103	15	.....	.....	.....	.....	.....	.....	.....	4.76	+0.81	1.23	24.7	10	19	7	5	nw.	G. H. Parkhurst.
Hightstown.....	Mercer.....	120	25	19.8 ^b	-11.1	.....	.....	-5	1	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	G. Franklin Eldridge.
Imlaystown†.....	Monmouth.....	185	29	19.6	-12.1	.....	.....	-8	1	33	3.65	+0.20	0.90	18.9	10	6	15	10	nw.	F. B. Jones.
Indian Mills.....	Burlington.....	76	28	21.6	-9.8	54	12	-10	20	36	5.10	+1.40	1.17	27.0	12	11	7	13	nw.	James M. Armstrong.
Lakewood.....	Ocean.....	54	14	20.7	-11.4	54	12	-7	2	30	4.52	+0.74	1.30	20.2	11	11	3	17	w.	R. W. Holman.
Moorestown.....	Burlington.....	75	55	21.9	-8.2	56	12	-3	1	31	3.22	-0.26	0.77	22.5	11	11	8	12	nw.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	10	.....	.....	.....	.....	.....	.....	.....	4.06	.....	1.30	21.5	11	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	19	.....	.....	.....	.....	.....	.....	.....	4.96	+1.56	1.33	.....	11	15	3	13	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	46	20.4	-10.1	54	12	-1	1	39	3.00	-0.17	0.72	19.3	12	9	5	17	w.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	24	23.0	-8.7	51	12	-5	1	33	6.00	+2.34	1.94	25.2	11	17	8	6	nw.	Frank R. Austin.
Vineland.....	Cumberland.....	109	49	22.6 ^a	-9.4	54	12	0	1	29	4.80	+1.03	1.28	.....	12	16	6	9	nw.	H. C. Himes.
Woodbine.....	Cape May.....	43	26	24.2	-8.2	53	12	-1	4	25	5.16	+1.51	1.25	18.2	10	12	5	14	nw.	Baron de Hirsch Agr. Sch.
Philadelphia, Pa.....	.....	117	47	24.2	-7.6	57	12	2	4	39	4.06	+0.65	0.96	27.0	12	9	5	17	nw.	U. S. Weather Bureau.
Means and extremes...	.....	.....	.....	21.7	-9.7	56	12	-10	20	39	4.52	+0.95	3.23	22.4	11	13	6	12	nw.	.....
The Sea Coast.																				
Asbury Park.....	Monmouth.....	22	28	23.1	-8.3	49	12	-3	4	25	3.73	-0.01	1.20	17.4	14	11	9	11	w.	Wilbur H. Pancoast.
Atlantic City.....	Atlantic.....	16	44	24.4	-8.1	51	12	0	4	27	4.34	+0.94	1.24	20.5	13	10	8	13	nw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	33	25.6	-8.5	50	12	3	4	26	3.54	+0.17	0.96	18.5	12	11	9	11	nw.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	10	19.8	-10.7	54	12	-4	4	24	5.45	+1.14	1.76	22.4	16	6	11	14	w.	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	19	21.7	-8.0	51	12	1	4	33	3.54	-0.56	1.29	9.4	13	9	10	12	w.	U. S. Weather Bureau.
Means and extremes...	.....	.....	.....	22.9	-8.7	54	12	-4	4	33	4.12	+0.34	1.76	17.6	14	10	9	12	w.	.....
For the State.....	.....	.....	.....	20.3	-9.6	56	12	-24	1	41	4.14	+0.35	3.23	18.9	11	12	8	11	nw.	.....

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

* Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Imlaystown is Cream Ridge.

Daily precipitation for January, 1918.

Stations.	Watershed.	Day of month.																															Total.	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>The Highlands and Kittatinny Valley.</i>																																		
Belvidere.....	Delaware.....						.57					1.96		1.12						.21			.34					.10	.14	.49			1.93	
Charlotteburg.....	Passaic.....						.54					1.95		.70						.15			.30					.11	.26				4.01	
Culvers Lake.....	Delaware.....	T.	T.				.57	.02				1.47		1.00					T.	.10			.24	T.	T.	.03		.19	.11	.03		T.	3.76	
Dover.....	Passaic.....						.66					1.73		.86				*	.40			.50		.20	.10	.20		.20		.20			4.85	
Layton.....	Delaware.....						.61	T.				2.26		.91						.09			.26		.01	T.	.10		.17	.08	T.			4.39
Newton.....	Delaware.....	T.	T.				.76	T.				1.25		.65					T.	.07			.25		T.	.10	.02	.31	.11	T.		T.	3.52	
Phillipsburg.....	do.....	T.					.06	.59				1.63		.01	.88				.20	T.			.28		.04	.04	.13	.03	.27	T.	.02		4.31	
Sussex.....	Hudson.....																																	
<i>The Red Sandstone Plain.</i>																																		
Bergen Point.....	Coast.....						.55				T.	1.29	T.	1.08		T.	.05	.12				.30		T.	T.		.11	.30					3.80	
Boonton III.....	Passaic.....						.54	.07				.8		.61	.22	T.		.14				.03	.40			.02	T.	.11	.01	.10			3.85	
Chatham III.....	do.....	T.					.48	.05		T.		1.38		*	.85			.23				*	.34			.01	.01	.09	.02	.14			3.60	
Elizabeth.....	Coast.....	T.					.56					1.10		.94		T.	*	.26				.40		T.	.03		.20		.25	T.			3.74	
Flemington.....	Raritan.....		.05				.54					1.35		.88			.20	.40				.50		T.			.20	.20	T.	T.	.10		4.42	
Highwood.....	Hackensack.....						.49					1.35		.99		T.	.12	.12				.35		T.	T.		.17	.06	.12		T.	3.77		
Jersey City**.....	Coast.....	T.					.54			T.		1.03		1.12		T.	*	.19				.40		T.	.02		.25	.22	.05	T.	*	.16	3.82	
Lambertville.....	Delaware.....									T.		1.10		.98			*	.30				.40		T.	T.		.31	.36		*			4.01	
Little Falls**.....	Passaic.....						.07	.60				1.0	.49	T.	.92		T.	.10	.09			.35		T.	T.	.08	.06	.15					3.56	
Newark**.....	Coast.....	T.					.01	.40				1.0	.79		.01	.80		.30	.15			.60		T.	T.	.10	.15	.15			T.			
New Brunswick.....	Raritan.....	T.					.51			T.		.64		.89		T.	.04	.14				.41	T.		.02		.25	.05	T.	.04	.02		3.01	
Palisades Park.....	Hackensack.....	T.					.44	.03		T.		1.40		1.08		T.	*	.45				.42		.02	.01		.12	.10		T.			4.07	
Paterson.....	Passaic.....	T.					.52			T.		1.69		.85		T.		.22				.33		T.	T.		.13		.01	T.			3.75	
Plainfield**.....	Raritan.....											1.43		.69	.12			.31				.09	.39			.06		.13	T.	.14			4.09	
Pompton Plains I.....	Passaic.....						.69	.04																										
Somerville.....	Raritan.....	T.					.54			T.		.97		.81		T.	.16	.14				.31			.02		.29	.06		T.	.06		3.36	
South Orange.....	Rahway.....	T.					.10					* 1.31		.52		T.	*	.23				.32		T.	T.		.18	*	.12	T.			2.78	
New York, N. Y***.....	Coast.....	T.					.59			T.		1.03		T.	.78		T.	.10	.04			.38		T.	.02	.11	.06	.17	T.	T.			3.41	
<i>The Southern Interior.</i>																																		
Bridgeton.....	Coast.....							T.				.82		1.22			*	.22				.65		T.			.25	.75		*	.30	4.21		
Burlington.....	Delaware.....		.01				.47	T.				.51		.83			*	.48				.61			.06		.28	.43		*	.14	3.82		
Clayton.....	Maurice.....						.20	T.				.25		3.23			.53	.13				.66		T.		.28	.62	T.	.17	T.			6.14	
Hammonton.....	Mullica.....		.07				.73					.67		1.23			*	.23				.72					.22	.62		*	.34	4.76		
Hightstown.....	Raritan.....						.01																											
Imlaystown.....	Delaware.....		T.				.50					.55		.90			.05	.15				.70		T.			.29	.31		.10	.10	3.65		
Indian Mills.....	Mullica.....	T.					.50					.61		1.17			.20	.30				.70			.04		.34	.86	.14	.16	.08	5.10		
Lakewood.....	Metedeconk.....	T.					.55			T.		.80		1.30			.06	.20				.60			.03		.33	.35	T.	.20	.10	4.52		
Moorestown.....	Delaware.....	T.					.35					.46		.77		*	.31					.50		T.		.23	.39	.03	*	.18		3.22		
Northfield.....	Coast.....		.01				.45					.34		1.30			.02					.68		T.		.27	.65	.04	.20	.40		4.06		
Pleasantville.....	Coast.....		.02				.51				T.	.40		1.33		T.	.02	T.				.80		T.			.25	1.13	.12	.35	.03	4.96		
Trenton***.....	Delaware.....		.03			.13	.20		T.			.14	.21	.72			.35	T.				.48		T.	.20		.05	.37		.12		3.00		
Tuckerton.....	Coast.....		.03				.70					.38		1.94			*					1.13					.47	.73		.62	*		6.04	
Vineland.....	Maurice.....	T.		T.			.46					.82		1.28			.15	.35				.80			.01	T.	.27	.31	.12	*	.23	4.80		
Woodbine.....	Coast.....		T.	.03			.32					.84		1.15	T.		*	.05				.80					.40	1.25		.32	T.		5.16	
Philadelphia, Pa.....	Delaware.....		.05				T.	.50		T.		.10	.44		.96			.48				.55			.04	.20	.07	.48	T.	.19	T.		4.06	
<i>The Sea Coast.</i>																																		
Asbury Park.....	Coast.....		.03				.01	.49				.04	.41		T.	1.20		T.	.16	.05			.45	T.		.04	.18	.28	.30		.09		3.73	
Atlantic City***.....	do.....		.02				.12	.46				.02	.19		1.24			.06	T.			.76			T.	.05	.27	.77	.04	.34	T.		4.34	
Cape May City.....	do.....		.05				T.	.42	T.			.04	.26		.96			.06	T.	.01		.50			T.		.12	.59		.46	.07	3.54		
Long Branch**.....	do.....		.06				.03	.61		T.		.04	1.21		1.76			.16	.04			.62	.01	T.		.01	.15	.16	.34	.06	.19	T.	5.45	
Sandy Hook***.....	do.....		T.				.11	.34				.04	.91		1.29		T.	.09	.01			.40			.01	.06	.02	.16	T.	.10		3.54		

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded.

|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.

* Precipitation included in the next following measurement. ** Precipitation for 24-hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.			Moisture.		Sun- shine	
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	Percentage of possible sunshine
							Miles per hour.	Direction.	Date.			
Atlantic City.....	29.93	30.45	30	28.96	15	9	36	s.	12	79	71	47
Cape May City.....	29.96	30.46	30	29.01	15	11	52	s.	12			
Long Branch.....	29.92	30.44	30	28.32	15	20	79	se.	12	69	62	52
Newark.....							40	w.	12	76*	68†	44
New York, N. Y.....	29.90	30.42	30	28.84	15	20	73	nw.	15	65	62	56
Palisades Park.....	29.90	30.40	27	28.86	15							
Philadelphia, Pa.....	29.94	30.48	30	28.96	12	11	43	s.	12	72	69	42
Sandy Hook.....	29.90	30.43	30	28.81	15	20	66	s.	12	74	70	54
Trenton.....	29.91	30.41	30	28.85	15	14	64	s.	12	60	71	47

§ Two directions

Daily temperatures for January, 1918.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.	
<i>The Highlands and Kittatinny Valley</i>																																	
Belvidere.....	Maximum...	17	9	16	21	27	32	35	26	26	31	32	25	29	36	30	38	30	21	19	26	21	23	21	35	36	21	9	37	28	32	26.3 ^a	
	Minimum...	-8	-4	-4	9	9	21	22	20	20	17	25	1	7	22	12	13	7	12	4	0	1	5	-3	16	21	7	0	9	8	16	9.1	
Charlotteburg.....	Maximum...	10	8	7	13	20	38	33	22	25	28	31	47	20	27	30	30	35	32	30	16	21	21	22	20	33	34	18	12	21	25	24.3 ^a	
	Minimum...	-12	-15	-3	-7	9	16	22	20	17	17	21	20	-2	5	18	11	5	12	-2	-2	2	6	8	-1	9	13	-1	-2	8	8	11	6.8
Dover.....	Maximum...	8	10	11	15	24	37	33	33	24	30	30	49	22	27	34	26	36	31	25	21	24	18	22	18	35	35	17	17	31	22	31	25.7
	Minimum...	-12	-7	-3	-6	10	17	24	18	18	...	20	14	0	5	21	12	13	7	5	1	4	9	10	6	16	14	7	5	16	11	17	9.1 ^a
Layton.....	Maximum...	13	12	10	16	24	40	32	34	22	31	31	48	24	27	33	26	36	26	22	19	23	21	21	18	35	36	17	10	32	23	25.6	
	Minimum...	-14	-12	-12	-7	6	10	20	19	18	18	21	24	-1	1	17	9	7	-6	10	-11	-11	-1	4	-3	14	16	4	0	10	4	14	5.4
Newton.....	Maximum...	13	4	11	15	23	31	33	35	24	28	31	48	20	25	31	25	34	29	24	17	24	19	21	18	31	35	16	8	31	24	28	24.4
	Minimum...	-13	-8	-9	-6	...	13	18	18	17	...	20	18	-1	5	19	10	15	17	8	0	1	8	7	3	13	15	3	-3	8	10	12	7.3 ^b
Phillipsburg.....	Maximum...	15	8	12	18	26	33	35	32	25	31	30	52	12	29	35	27	35	30	23	19	25	21	24	21	35	37	16	15	34	24	31	26.1
	Minimum...	-2	0	-2	-4	11	16	26	22	20	21	20	11	2	10	19	13	17	10	5	-1	2	8	8	4	16	14	7	1	14	13	17	10.3
Sussex.....	Maximum...																																
	Minimum...																																
<i>The Red Sandstone Plain.</i>																																	
Bergen Point.....	Maximum...	11	11	14	18	28	32	34	35	28	35	33	50	24	30	41	30	39	35	28	21	27	21	27	25	36	36	33	23	34	33	31	29.1
	Minimum...	-5	-2	-3	-4	2	16	27	22	21	20	20	22	5	12	18	18	22	21	10	2	3	6	10	5	18	20	9	6	...	14	18	11.8 ^a
Boonton§§.....	Maximum...	13	10	11	18	25	35	35	27	27	32	50	47	18	30	36	27	39	32	21	20	26	22	25	21	36	27	17	24	32	24	32	27.1
	Minimum...	-13	-13	-5	-5	0	10	11	24	20	20	18	19	2	3	17	14	11	6	12	2	0	3	8	2	5	18	9	6	4	6	11	7.3
Elizabeth.....	Maximum...	14	11	16	19	28	35	33	34	28	34	33	51	29	31	40	34	40	35	31	21	28	22	27	24	37	36	22	17	35	27	34	29.2
	Minimum...	-7	-10	2	-7	12	12	26	24	20	19	27	5	10	25	18	20	17	16	-3	1	9	7	1	18	22	12	7	17	5	19	11.7	
Flemington.....	Maximum...	19	15	14	21	28	38	33	33	27	32	31	50	25	30	38	31	39	31	28	28	23	25	24	39	33	22	17	38	25	33	28.9	
	Minimum...	-1	-1	2	-2	11	14	27	24	21	21	19	25	5	10	24	16	18	15	13	-6	3	8	4	4	18	22	12	8	17	1	19	12.0
Highwood.....	Maximum...	9	9	9	9	17	26	30	35	35	28	34	34	48	27	29	36	28	38	28	20	25	19	24	20	35	35	21	19	31	22	31	26.9
	Minimum...	-7	-15	1	-5	10	10	24	22	20	19	20	5	9	20	17	13	11	10	-4	-2	5	3	2	16	20	7	6	16	16	18	10.1	
Jersey City.....	Maximum...	10	11	14	18	28	33	35	33	28	34	32	51	23	30	40	31	39	34	27	19	26	22	26	24	36	36	22	20	32	27	30	28.1
	Minimum...	-4	0	4	-2	13	18	28	24	22	22	23	23	7	12	28	20	26	25	16	5	6	16	14	11	20	22	11	11	19	17	20	15.4
Lambertville.....	Maximum...																																
	Minimum...																																
Little Falls.....	Maximum...	11	13	11	17	30	32	35	35	28	35	32	49	17	30	37	28	37	35	28	19	25	22	26	24	36	37	20	19	35	28	33	27.9
	Minimum...	-7	-10	-2	-4	11	17	26	21	21	17	24	16	6	10	17	12	18	12	9	1	7	11	10	3	18	16	9	9	10	9	12	7.4
Newark.....	Maximum...	12	10	12	13	24	32	35	33	30	32	33	51	22	28	40	26	39	33	28	19	21	25	23	27	37	30	19	24	32	24	31	27.1
	Minimum...	-5	-2	2	-3	8	18	26	23	22	21	23	22	4	10	26	18	23	21	16	4	6	14	15	10	15	19	10	16	17	16	19	13.7
New Brunswick.....	Maximum...	13	11	12	18	26	36	34	35	25	31	30	54	27	29	42	32	37	34	30	16	22	19	23	22	37	33	19	19	32	29	29	27.7
	Minimum...	-7	-2	3	-3	11	15	26	24	20	19	19	24	5	11	24	18	23	19	14	-1	4	10	9	4	18	23	11	7	18	11	18	12.7
Palisades Park.....	Maximum...	11	9	12	18	28	34	34	34	28	33	32	49	17	30	38	28	40	32	27	19	26	19	25	20	36	36	15	20	33	24	34	27.1
	Minimum...	-8	-12	-2	-6	12	12	28	20	18	24	21	17	5	12	24	18	20	15	8	0	1	6	7	3	17	14	7	7	12	9	15	10.5
Paterson.....	Maximum...	11	10	15	18	28	34	34	35	30	35	34	48	29	31	37	30	40	34	30	22	28	22	27	24	38	36	23	17	34	28	32	28.8
	Minimum...	-6	0	3	-3	12	17	25	22	21	21	23	28	5	10	24	17	19	16	15	3	5	14	14	9	18	23	9	7	16	14	19	13.5
Plainfield.....	Maximum...																																
	Minimum...																																
Somerville.....	Maximum...	15	12	13	20	26	36	35	33	27	32	32	50	26	31	39	31	38	32	30	18	25	20	25	23	39	36	22	17	35	33	31	28.5
	Minimum...	-12	-8	2	-3	9	10	27	22	20	19	18	25	5	7	24	17	17	13	11	-13	-6	1	-2	17	19	11	7	15	-2	33	31	28.5
South Orange.....	Maximum...	10	10	12	17	25	32	34	35	27	33	31	49	19	29	39	26	37	33	29	19	25	20	24	21	35	37	21	18	32	25	31	26.9
	Minimum...	-6	-5	-1	-4	12	16	26	22	21	21	20	19	5	12	25	18	21	18	10	3	8	14	13	6	19	20	11	6	17	14	20	12.9
New York, N. Y.....	Maximum...	13	12	11	18	28	34	37	36	31	34	34	50	16	30	40	28	39	37	26	22	29	23	27	29	37	38	14	23	34	27	31	28.8
	Minimum...	-5	1	0	-3	14	19	28	22	20	22	23	16	5	13	25	19	28	26	10	4	8	15	15	11	23	18	10	11	17	21	21	14.5
<i>The Southern Interior.</i>																																	
Bridgeton.....	Maximum...	18	14	15	20	32	37	40	32	30	38	36	...	30	30	42	35</																



Scale of Shades.

0 to 2 inches.
2 to 4 inches.
4 to 6 inches.
6 to 8 inches.
Over 8 inches.

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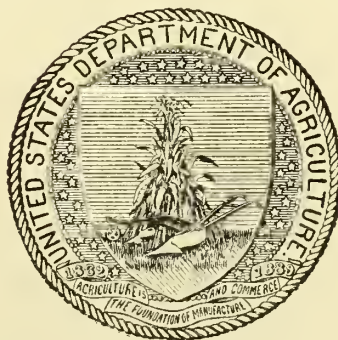
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WEATHER BUREAU
CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

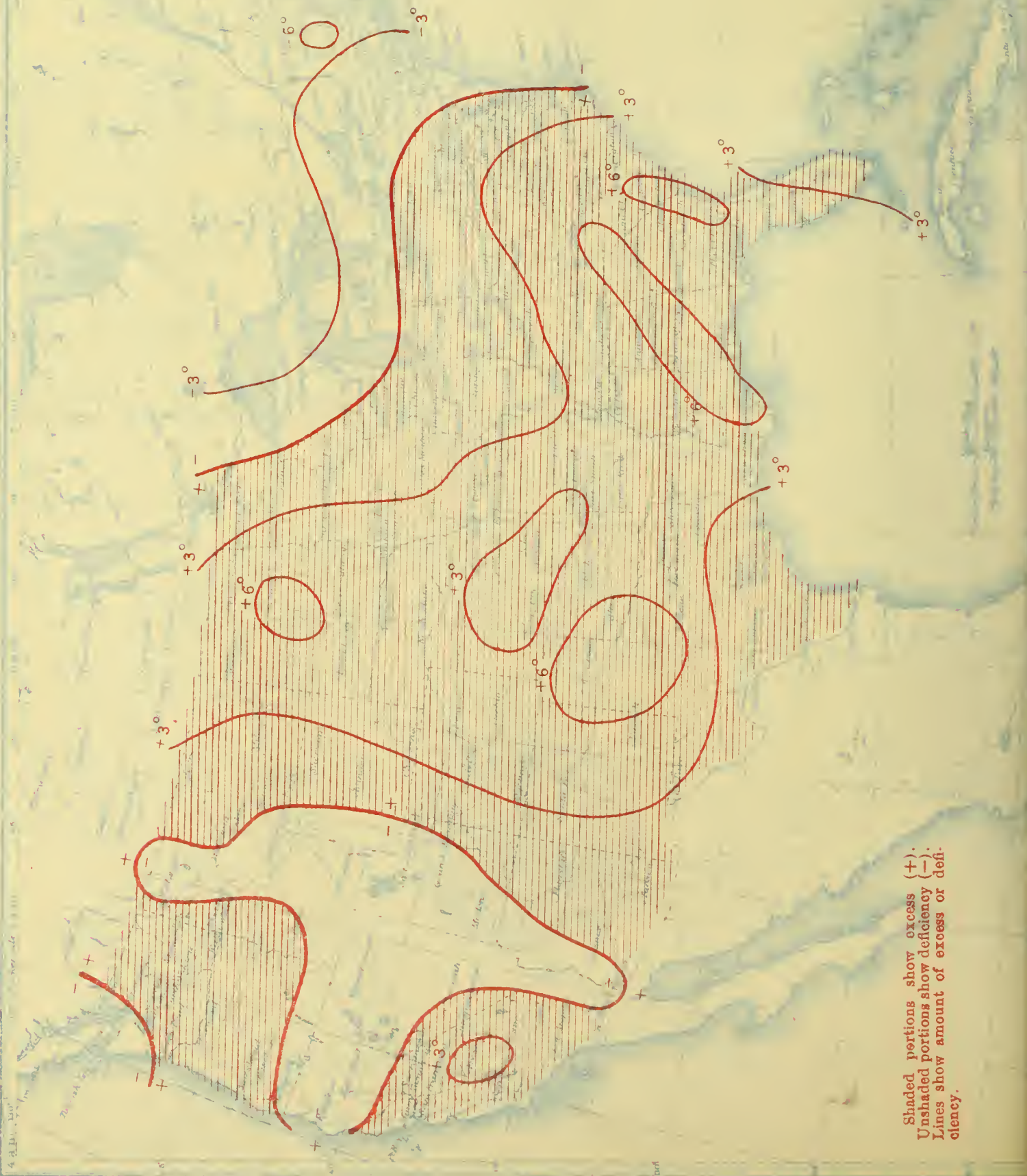
FEBRUARY, 1918.

BY
G. HAROLD NOYES
METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
MARCH 18 1918.

Departure of the Mean Temperature from the Normal, February, 1918.



Shaded portions show excess (+).
Unshaded portions show deficiency (-).
Lines show amount of excess or deficiency.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

VOL. XXIII. TRENTON, N. J., FEBRUARY, 1918.

No. 2.

GENERAL SUMMARY.

The usual disagreeable characteristics of February weather were not present to any undue extent in New Jersey during the month under review. The severe cold weather of January continued into this month so that in some sections February records were broken the first week, the thermometer on the 5th averaging some 30° below normal. Thereafter during the month, a fair proportion of the days were above normal in warmth, sunshine and absence of rain and snow. The warm days from the 12th to the 15th thawed the ice in streams so that it commenced to break and float down, causing little or no trouble. Cold weather from the 16th to the 18th checked further thawing, allowing the streams to empty themselves of ice without gorging, and the warmth from the 24th to the close of the month loosened the ice in the headwaters, and the streams were again clear for the first time in practically ten weeks. The highest water in the middle and lower Delaware was on the 21st, and was of slight importance except for the great velocity with which it carried huge ice cakes, estimated in some instances up to 30 inches in thickness. The ground became generally free from snow about the 12th. In a few instances in extreme southern districts some plowing had been done by the close of the month.

The mean stage of the Delaware River at Phillipsburg was 6.3 feet for the 16 days when it was not frozen, the highest stage being 15.0 feet on the 21st. At Trenton the mean daily stage was 3.3 feet, which was 0.4 foot below normal; the highest stage was 7.1 feet on the 22d.

The temperature departure from normal for the year 1918, by sections is: The Highlands, -5.6°; Red Sandstone Plain, -5.5°; Southern Interior, -4.8°; The Seacoast, -5.4°. The precipitation accumulated departure from the normal for the year 1918 by sections is: The Highlands, -0.82 inch; Red Sandstone Plain, -1.59 inches; Southern Interior, -1.44 inches; The Seacoast, 1.77 inches.

Storm warnings were displayed along the coast on the 3d, 4th, 9th, 12th to 14th, 19th, 20th, 24th, and 25th.

TEMPERATURE.

The mean monthly temperature of the State as deduced from observations of 36 stations, was 29.0°, which was 1.0° below normal. The highest temperature was 67° at Woodbine on the 28th, and the lowest 23° below zero at Charlotteburg and Culvers Lake on the 2d. The highest monthly mean was 34.0° at Vineland, and the lowest, 22.0° at Charlotteburg. The greatest daily range of temperature was 50° at Indian Mills on the 6th. In no case were the mean of the maxima below freezing, or the mean of the minima above freezing.

PRECIPITATION.

The average total precipitation of the State, as deduced from observations of 41 stations, was 2.08 inches, which was 1.78 inches below normal. The average total snowfall was 2.6 inches, which was 7.6 inches less than normal. The greatest monthly amount of precipitation was 3.41 inches at Dover, and the least, 1.03 inches at Asbury Park. The greatest total snowfall was 5.8 inches at Culvers Lake, and the least, 1.2 inches at Moorestown. The greatest amount of precipitation in any 24 consecutive hours was 1.74 inches at Dover on the 19th-20th. The principal days of precipitation were the 3d, 6th-7th in the northern half, 9th, 15th, 19th, 20th, 22d, and 26th. The average number of days on which 0.01 inch or more precipitation occurred was 7, which was 2 less than normal.

WIND.

The prevailing wind direction was from the northwest with a considerable number of stations reporting west and southwest. Wind movement approximated 15 miles per hour, the highest velocity for 5 consecutive minutes being 80 miles per hour from the west at Long Branch on the 26th. High winds also occurred on the 4th, 15th, 17th, and 20th. The gale of the 26th was severe and long continued, and did considerable damage.

SUNSHINE AND CLOUDINESS.

The average number of clear days throughout the State was 12, which was 1 more than normal; partly cloudy, 8, or normal; cloudy, 8, or 1 less than normal. Sunshine approximated 56 percent. of the possible.

MISCELLANEOUS.

Atmospheric pressure reduced to sea level, averaged 30.11 inches, which was 0.01 inch above normal. Lowest readings were about 29 inches on the 26th. Solar halos were observed on the 1st, 2d, 6th, 16th, 18th, and 25th; lunar halos on the 18th, 23d, 24th, and 27th. Sleet occurred on the 3d, 6th, and 9th. Dense fog occurred on the 3d, 14th, 15th, 19th, 20th, and 28th. Thunder was heard in the southeastern districts on the 20th and 25th.

COMPARATIVE DATA FOR FEBRUARY.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more prec.
1885.....	23.9	54	-2	3.93	5.85	1.44	.....	.....	.....	.....
1886.....	28.9	64	-10	5.42	8.00	4.13	.....	.....	.....	.....
1887.....	33.9	69	-6	5.24	6.74	4.13	.....	.....	.....	.....
1888.....	30.6	60	-5	3.53	6.01	2.04	.....	.....	.....	.....
1889.....	27.7	53	-3	2.49	3.80	1.65	.....	.....	.....	.....
1890.....	39.9	76	14	4.17	5.32	2.43	.....	.....	.....	.....
1891.....	28.0	71	1	5.11	7.20	3.70	6	9	13	14
1892.....	33.6	58	-7	1.63	3.62	0.67	7	9	13	7
1893.....	30.1	63	-1	5.73	8.90	3.14	7	9	13	11
1894.....	29.7	62	-11	4.42	6.17	3.25	9	8	11	11
1895.....	23.6	57	-12	1.28	2.24	0.55	13	9	6	5
1896.....	32.1	62	-12	6.77	10.06	4.82	9	9	11	12
1897.....	32.5	59	-6	3.61	6.37	2.38	8	10	10	8
1898.....	32.7	65	-15	3.48	5.45	1.55	12	7	9	9
1899.....	25.8	60	-17	6.06	8.77	3.78	10	6	12	15
1900.....	31.0	69	-6	5.30	7.88	3.27	9	9	10	10
1901.....	25.4	52	-6	<i>0.94</i>	<i>1.65</i>	<i>0.69</i>	15	9	4	4
1902.....	27.4	62	-7	6.24	8.44	4.29	12	6	10	9
1903.....	33.7	70	-16	4.87	6.60	3.74	12	8	8	16
1904.....	24.8	65	-16	2.45	3.69	1.36	13	8	8	8
1905.....	23.4	53	-18	2.53	3.96	0.70	14	7	7	7
1906.....	30.9	64	-12	2.58	3.85	1.77	14	7	7	7
1907.....	23.6	55	-22	2.67	3.90	1.82	14	7	7	7
1908.....	28.1	65	-17	4.79	7.44	2.85	10	10	9	9
1909.....	37.8	72	-2	4.96	6.78	3.55	6	10	12	12
1910.....	30.5	69	-11	3.08	4.81	1.06	10	9	9	10
1911.....	30.9	67	-12	2.78	4.06	1.76	8	7	13	11
1912.....	27.7	61	-14	2.49	3.12	1.68	11	12	6	5
1913.....	30.6	70	-5	2.49	3.21	1.48	16	6	6	7
1914.....	25.9	67	-17	2.85	4.94	1.89	12	7	9	9
1915.....	35.7	75	-2	5.37	7.28	2.97	11	6	11	8
1916.....	28.1	63	-18	4.21	6.17	2.84	10	6	13	11
1917.....	28.1	62	-17	1.95	2.80	1.18	10	9	9	11
1918.....	29.0	67	-23	2.08	3.41	1.03	12	8	8	7

ERRATA.

AUGUST, 1916.—Culvers Lake; greatest precipitation in 24 hours 5.58, should read 0.58; Inlaystown; date of lowest temperature ft. should read 14; Tuckerton; greatest precipitation in 24 hours 0.76, should read 0.67; Atlantic City; departure from normal temperature +9.6, should read +0.6.

OCTOBER, 1916.—Indian Mills; date of lowest temperature 26, should read 27.

NOVEMBER, 1916.—Burlington; mean temperature 41.9, should read 45.0; departure from normal +0.9, should read +1.0; minimum temperature on the 1st, 45, should read 51; mean minimum temperature 34.8, should read 35.0.

DECEMBER, 1916.—Layton; prevailing wind direction NW, should read W; South Orange; precipitation on the 12th, 0.64, should read 0.04; total precipitation 4.50, should read 3.90; departure from normal +0.67, should read +0.07; Pleasantville; precipitation on 21st and 22d, 0.13 and 1.21, should read, respectively, 0.90 and 1.00; total precipitation 3.62, should read 4.18; departure from normal -0.05, should read +0.51; greatest in 24 hours 0.60, should read 1.60.

ANNUAL, 1916.—Boonton; highest temperature 98, should read 99; total snowfall 50.8, should read 50.9; New Brunswick; number cloudy days 84, should read 85; Burlington; precipitation in February 4.57, should read 3.57; Inlaystown; precipitation in July 3.35, should read 3.85; Pleasantville; December precipitation 3.62 and departure -0.05, should read 4.18 and +0.51, respectively; Trenton; precipitation departure in April -0.22, should read -0.62; September precipitation 1.51, should read 2.51; Cape May City; precipitation in March 1.97, should read 4.79.

Climatological data for February, 1918.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation 0.1 in. or more.	Clear.	Pt. cloudy.			Cloudy.
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	27	26.0	-1.4	55	25	-14	2	40	2.96	-1.36	1.15	3.0	7	15	5	8		Samuel J. Hixson. George S. Briggs. Brice E. Riker. William C. Harris. A. M. Depue.
Charlotteburg.....	Passaic.....	719	26	22.0 ^a	-4.3	56	25	-23	2	46	2.74	-1.92	1.24	.....	7	16	8	4	w.	
Culvers Lake††.....	Sussex.....	848	17	.....	.....	.....	.....	-23	2†	.....	2.45	-0.90	1.00	5.8	8	14	8	6	se.	
Dover.....	Morris.....	600	34	26.3	+0.1	56	25	-11	2	34	3.41	-0.83	1.74	3.5	6	2	18	8	.....	
Layton.....	Sussex.....	480	18	23.8	-0.3	54	25	-21	2	40	1.89	-1.57	0.58	4.6	6	14	3	11	s.	
Newton.....	Sussex.....	769	37	24.4	-1.3	54	25	-11	5†	33	2.13	-1.70	0.66		8	5	11	12	sw.	Irving G. Kern. D. Wilson Smith. W. W. Titsworth.
Phillipsburg.....	Warren.....	363	36	26.3	-1.5	55	25	-9	2†	38	2.99	-0.80	1.67	3.6	9	11	11	6	nw.	
Sussex.....	Sussex.....	442	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Means and extremes.....				24.8	-1.4	56	25	-23	2†	46	2.65	-1.30	1.74	4.1	7	11	9	8	sw.	
<i>The Red Sandstone Plain.</i>																				
Bergen Point††.....	Hudson.....	37	21	29.8	-0.6	58	20†	-8	5	35	1.89	-2.50	0.90	2.5	7	4	20	4	nw.	William H. Mitchell. J. W. Demmers. Paul Molitor. L. B. Bonnett. Hiram E. Deats.
Boonton.....	Morris.....	400	28	25.0	.....	56	25	-13	2	46	3.20	-1.01	1.66	3.5	9	18	6	4	sw.	
Chatham.....	Morris.....	330	16	.....	.....	.....	.....	.....	.....	.....	3.35	-0.51	1.67	.....	7	8	12	8	.....	
Elizabeth.....	Union.....	45	39	29.8	-0.6	59	25	-10	5	39	2.94	-1.32	1.19	2.5	8	8	13	7	sw.	
Flemington.....	Hunterdon.....	140	30	28.0	-2.5	56	25	-15	2	40	3.03	-0.36	1.43	2.5	8	16	7	5	w.	
Highwood.....	Bergen.....	90	29	26.8	-1.9	54	20	-13	2	36	2.62	-1.91	1.20	5.2	8	8	11	9	nw.	Charles J. Bates. S. K. Pearson, Jr. Thomas H. Hunt. Montclair Water Co. Prof. William Wiener.
Jersey City.....	Hudson.....	10	19	30.3	-0.9	57	20	-6	5	34	2.39	-1.55	1.04	3.5	8	11	9	8	sw.	
Lambertville.....	Hunterdon.....	80	31	27.6	-2.8	57	20	-11	2	40	3.07	-0.47	1.54	2.3	10	9	11	8	sw.	
Little Falls.....	Passaic.....	180	15	27.6 ^a	.....	57	25	-10	2	38	2.86	-1.43	1.37	3.1	8	19	4	5	w.	
Newark.....	Essex.....	159	76	29.3	-0.5	57	25	-7	5	43	2.19	-1.49	1.10	2.5	7	12	9	7	sw.	
New Brunswick.....	Middlesex.....	110	65	30.0	-1.3	59	20	-8	5	40	2.69	-1.00	1.35	2.3	9	12	9	7	w	N. J. Experiment Station. George P. Kirsten. Marion T. Probert. John Neagle. M. S. Taylor
Palisades Park.....	Bergen.....	80	3	26.8	.....	55	20†	-8	5	40	2.79	.....	1.13	4.3	9	9	10	10	nw.	
Paterson.....	Passaic.....	80	47	29.8	-0.4	57	25	-7	5	33	2.35	-2.05	1.17	5.7	7	4	4	20	nw.	
Plainfield.....	Union.....	100	32	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Pompton Plains.....	Morris.....	195	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Somerville.....	Somerset.....	60	36	27.8	-2.2	58	20†	-16	2	44	2.67	-0.88	1.22	1.7	7	9	11	8	sw.	A. A. Macdonald. Dr. W. J. Chandler. U. S. Weather Bureau.
South Orange.....	Essex.....	200	48	28.4	-0.6	57	20	-7	5	36	2.40	-1.62	1.10	2.2	6	13	6	9	w.	
New York, N. Y.....	.....	365	48	29.6	-1.1	58	20	-7	5	41	1.98	-1.76	0.86	3.5	9	5	13	10	nw.	
Means and extremes.....				28.4	-1.3	59	20†	-16	2	46	2.70	-1.29	1.67	3.1	8	11	9	8	sw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	37	33.1	-0.8	63	15	-8	5	43	1.48	-2.62	0.60	2.0	5	17	2	9	w.	Henry A. Jorden. D. S. B. McCoy. W. Rex B. Sutch. G. H. Parkhurst. G. Franklin Eldridge.
Burlington.....	Burlington.....	12	32	31.0	+0.1	61	25	-6	5	39	1.52	-2.22	0.90	1.3	5	19	2	7	nw.	
Clayton.....	Gloucester.....	126	26	31.8	+0.1	63	28	-7	5†	47	1.59	-2.43	0.79	2.0	6	16	4	8	sw.	
Hammonton.....	Atlantic.....	103	16	.....	.....	.....	.....	.....	.....	.....	1.21	-2.68	0.39	1.7	5	20	1	7	sw.	
Hightstown.....	Mercer.....	120	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Imlaystown††.....	Monmouth.....	185	30	29.6 ^a	-1.3	60	20†	-12	5	42	1.26	-2.32	0.52	2.0	5	7	14	7	nw.	F. B. Jones. James M. Armstrong. R. W. Holman. Geo. L. Gillingham. William L. Flick.
Indian Mills.....	Burlington.....	76	29	32.0	-0.1	64	25†	-10	6	50	1.45	-2.51	0.52	2.5	7	12	9	7	nw.	
Lakewood.....	Ocean.....	54	15	29.5	-0.3	59	15	-12	2	45	1.25	-2.59	0.44	2.0	6	13	5	10	nw.	
Moorestown.....	Burlington.....	75	56	32.0	+1.0	60	28	-8	5	43	1.15	-2.48	0.61	1.2	5	12	8	8	nw.	
Northfield.....	Atlantic.....	25	11	.....	.....	.....	.....	.....	.....	.....	1.06	-2.59	0.33	1.4	7	.....	.....	.....	.....	
Pleasantville.....	Atlantic.....	26	20								1.44	-1.52	0.40		8	14	5	9		Lincoln Van Gilder. U. S. Weather Bureau. Frank R. Austin. H. C. Himes Baron de Hirsch Agr. Sch.
Trenton.....	Mercer.....	190	47	30.0	-0.7	60	25	-6	5	38	1.84	-1.35	0.94	1.9	9	11	5	12	sw.	
Tuckerton.....	Ocean.....	23	25	31.3 ^a	-0.8	62	15	-5	5	38	1.20	-2.59	0.50	2.0	5	13	9	6	nw.	
Vineland.....	Cumberland.....	109	50	34.0 ^a	+1.5	65	28	-6	5	41	1.16	-2.89	0.53	2.0	6	.....	.....	.....	s.	
Woodbine.....	Cape May.....	43	27	33.7 ^b	+1.1	67	28	-7	6	47	1.41	-2.64	0.46	2.0	7	17	5	6	sw.	
Philadelphia, Pa.....		117	48	33.4	+0.6	61	25	-2	5	35	1.57	-1.81	0.89	2.5	7	8	9	11	nw.	U. S. Weather Bureau.
Means and extremes.....				31.6	0.0	67	28	-12	2†	50	1.36	-2.39	0.94	1.8	6	14	6	8	nw.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	29	31.4 ^a	-0.5	61	15	-7	5	42	1.03	-2.80	0.42	1.3	6	14	6	8	w.	Wilbur H. Pancoast. U. S. Weather Bureau. U. S. Weather Bureau. William D. Martin, Jr. U. S. Weather Bureau.
Atlantic City.....	Atlantic.....	16	45	31.7	-1.3	62	15	-4	5	31	1.34	-1.93	0.43	1.8	9	11	8	9	nw.	
Cape May City.....	Cape May.....	17	34	32.4	-1.7	60	15	0	5	34	1.17	-2.12	0.36	1.6	8	12	6	10	s.	
Long Branch.....	Monmouth.....	25	11	26.7	-5.2	58	20	-9	5	41	1.91	-1.87	0.92	2.5	8	10	12	6	nw.	
Sandy Hook.....	Monmouth.....	22	20	29.4	-1.3	56	20	-4	5	36	1.73	-1.84	0.84	2.1	10	9	11	8	nw.	
Means and extremes.....				30.3	-2.0	62	15	-9	5	42	1.44	-2.11	0.92	1.9	8	11	9	8	nw.	
For the State.....				29.0	-1.0	67	28	-23	2†	50	2.08	-1.78	1.74	2.6	7	12	8	8	nw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

* Received too late to be included in the means.

Reference letters, ^a, ^b, ^c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Imlaystown is Cream Ridge.

Daily precipitation for February, 1918.

Stations.	Watershed.	Day of month.																														Total.		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		31	
<i>The Highlands and Kittatinny Valley.</i>																																		
Belvidere.....	Delaware.....			.05			T			.33										1.15	.85		.16	.02			.40						2.96	
Charlotteburg.....	Passaic.....			.10						.16					.08					* 1.24			.08				1.08						2.74	
Culvers Lake.....	Delaware.....			.10	T		T			.19					.04			T		.44	.56		.12	.04			.96						2.45	
Dover.....	Passaic.....			.07						.35										* 1.74			.20				1.05						3.41	
Layton.....	Delaware.....			.10			T			.45										.46	.10		.20	T			.58		T				1.89	
Newton.....	Delaware.....			.10			T	T		.23					.03				T	.57	.66		.09	.02			.43						2.13	
Phillipsburg.....	do.....			.07			.04	T		.27					.02					1.37	.30		.14				.36	.42					2.99	
Sussex.....	Hudson.....																																	
<i>The Red Sandstone Plain.</i>																																		
Bergen Point.....	Coast.....			.10			T	.02		.19										*	.59		.09			T	.90						1.89	
Bononton.....	Passaic.....			.02	.05			.03		.08	.17				.02					T	1.65			.08			1.09						3.20	
Chatham.....	do.....			.16						.12	.18				.05					1.67				.06			1.11						3.35	
Elizabeth.....	Coast.....			.12			*	.03		.18					T			T		* 1.30			.12				1.19						2.84	
Flemington.....	Raritan.....			.05			T	.11		.24				T		.03				.72	.71		.20				.97						3.03	
Highwood.....	Hackensack.....			.02			T	.03		.18					.01		T			.82	.38		.15				.98						2.62	
Jersey City.....	Coast.....			.10			.01			.17					.01	T				* 1.04			.12				.94		T				2.39	
Lambertville.....	Delaware.....			.10			*	.02		.22				T		.01				* 1.54			* .13				1.05						3.07	
Little Falls**.....	Passaic.....			.12			.03			.23				T	T	T	T			1.08	.29		.28				.13	.70					2.86	
Sewark**.....	Coast.....			.08			T			.06				T		T	T			.73	.37		.12				.23	.60					2.19	
New Brunswick.....	Raritan.....			.04			T	.02		.21					.02					.43	.92		.05	.02			.98						2.96	
Palisades Park.....	Hackensack.....			.14			.03	.02		.22				T		.03				* 1.13			.15				1.07						2.79	
Paterson.....	Passaic.....			.09	T			.03		.16				T						.53	.64		.14	T			.76						2.35	
Plainfield**.....	Raritan.....																																	
Pompton Plains.....	Passaic.....			T	.09			T		.08	.23				.03					T	1.51			.13				1.12						3.19
Somerville.....	Raritan.....			.18						.24					T					.41	.81		.03	.02			.98						2.67	
South Orange.....	Rahway.....			.08			T	T		.20										* 1.10			.06				.96						2.40	
New York, N. Y.**.....	Coast.....			.14			.01	T		.18				T		.01	T	T		.59	.22		.15				.05	.58					1.98	
<i>The Southern Interior.</i>																																		
Bridgeton.....	Coast.....			.10						.28										.10	.60		.20				.20						1.48	
Burlington.....	Delaware.....			T			T	T		.20				T		T				.60	.30		.11	T			.31						1.52	
Clayton.....	Maurice.....			T				.04		.13					T					.43	.36		.25	T			.38						1.59	
Hammonton.....	Mullica.....			T						T						.31				*	.39		.13				.38						1.21	
Hightstown.....	Raritan.....																																	
Imlaytown.....	Delaware.....			T						.25					T					.10	.42		.20				.29						1.26	
Indian Mills.....	Mullica.....			.06				.06		.29										.12	.40		.22				.30						1.45	
Lakewood.....	Metedeconk.....			.07			T			.22					T					.06	.38		.18			T	.34						1.25	
Moorestown.....	Delaware.....									.24										.15	.46		.07				.23						1.15	
Northfield.....	Coast.....			.06						.26					.05					.13	.20		.10				.26						1.06	
Pleasantville.....	Coast.....			.20				.02		.32					.02					.16	.17		.15				.40						1.44	
Trenton***.....	Delaware.....			.06			T	.01		.20					.03	T				.65	.39		.10		T	.19	.31						1.84	
Tuckerton.....	Coast.....									.03										*	.50		.27				.40						1.26	
Vineland.....	Maurice.....			.07				.03		.03										*	.53		.16				.37						1.16	
Woodbine.....	Coast.....			.04						.20					.01					.06	.40		.40				.30						1.41	
Philadelphia, Pa.....	Delaware.....			.03			T	T		.17					T					.67	.22		.20		T	.04	.24						1.57	
<i>The Sea Coast.</i>																																		
Asbury Park.....	Coast.....			T			T			.12										*	.36		.13				.04	.38					1.03	
Atlantic City***.....	do.....			.05			T	.02		.24					T	.18				.14	.29		.17			.01	.24						1.34	
Cape May City.....	do.....			.06				.01		.14						.02				.18	.25		.15				.36						1.17	
Long Branch**.....	do.....			.04			T			.12					.03	T				.40	.20		.20				.06	.86					1.91	
Sandy Hook***.....	do.....			.04			.01	.01		.19				T		.02				.58	.27		.16		T	.14	.32						1.73	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded.
‡ Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.
* Precipitation included in the next following measurement. **Precipitation for 24-hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

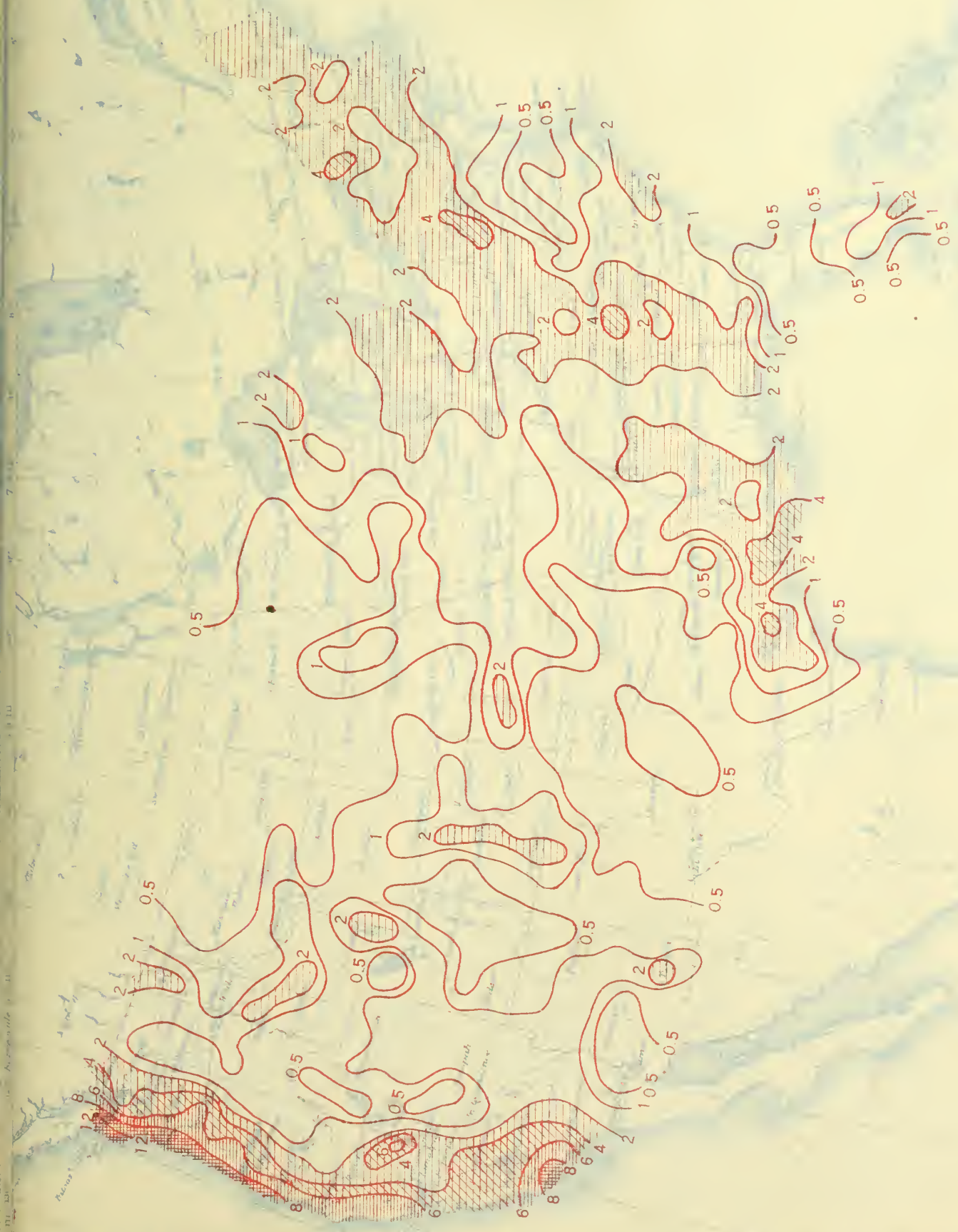
Stations.	Pressure.					Wind.			Moisture.		Sun- shine	
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.		Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.		
							Miles per hour.	Direction.				Date.
Atlantic City.....	30.13	30.75	21	29.09	26	9	35	nw.	26	78	78	56
Cape May City.....	30.16	30.76	21	29.47	26	10	42	nw.	26			
Long Branch.....	30.11	30.76	21	28.99	26	21	80	w.	26	70	61	55
Newark.....							50	nw.	26	71*	63†	54
New York, N. Y.....	30.09	30.74	21	28.98	26	22	81	w.	26	65	59	56
Palisades Park.....	30.09	30.73	21	28.97	26							
Philadelphia, Pa.....	30.12	30.74	21	29.02	26	10	36	nw.	26	74	73	55
Sandy Hook.....	30.09	30.75	21	29.00	26	18	73	w.	26	74	73	57
Trenton.....	30.09	30.75	22	29.03	26	13	70	w.	26	72	72	66

§ Two directions and dates

* 7 a. m. † 9 p. m.

Daily temperatures for February, 1918.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.
<i>The Highlands and Kittatinny Valley.</i>																																
Belvidere.....	Maximum...	22	19	22	22	7	25	44	40	34	35	45	50	45	49	51	37	28	33	37	50	32	22	37	48	55	49	48	49	.....	37.0	
	Minimum...	5	-14	0	7	-9	-8	22	22	14	19	27	25	36	18	...	16	18	10	23	31	6	6	-3	15	28	32	24	33	.....	14.9*	
Charlotteburg.....	Maximum...	22	23	22	29	5	25	43	35	32	36	38	51	50	44	50	39	...	30	38	53	26	12	31	51	56	49	44	47	.....	36.3*	
	Minimum...	5	-23	9	-2	-16	-11	17	12	1	14	20	22	29	...	26	...	14	-2	9	26	-8	-11	-3	6	20	17	8	21	...	7.7*	
Dover.....	Maximum...	24	21	29	28	...	30	47	31	35	34	40	48	47	45	50	36	26	30	42	52	18	20	35	50	56	47	45	49	.....	37.6*	
	Minimum...	3	-11	1	3	-10	-6	30	13	12	19	28	33	29	19	23	17	16	10	20	18	5	3	5	21	31	28	24	36	...	15.0	
Layton.....	Maximum...	20	19	18	25	1	22	46	36	36	38	40	51	50	44	49	35	27	29	38	51	22	17	35	47	54	47	43	46	...	35.4	
	Minimum...	7	-21	-9	0	-11	-11	12	16	7	15	28	29	36	14	35	12	16	0	14	26	3	0	-4	16	28	30	18	34	...	12.1	
Newton.....	Maximum...	22	16	27	25	1	21	...	34	35	37	38	43	46	42	48	34	26	29	38	51	26	19	32	45	54	46	43	45	...	34.2*	
	Minimum...	6	-8	3	-1	-11	-11	20	15	10	18	26	34	34	22	33	15	16	8	20	25	1	1	4	12	33	30	22	34	...	14.7	
Phillipsburg.....	Maximum...	18	20	26	28	5	25	48	34	37	37	43	49	46	47	50	30	27	32	48	53	18	21	39	48	55	46	48	50	...	36.7	
	Minimum...	2	-9	5	-3	-9	-1	25	15	15	23	30	28	29	22	27	17	17	12	23	15	6	7	6	20	32	31	26	35	...	15.9	
Sussex.....	Maximum...																															
	Minimum...																															
<i>The Red Sandstone Plain.</i>																																
Bergen Point.....	Maximum...	25	30	30	30	6	35	49	42	36	35	42	51	52	45	56	38	32	35	41	58	28	28	38	55	58	55	52	48	...	40.4	
	Minimum...	10	-2	0	0	-8	0	27	20	...	26	30	32	38	26	30	18	20	14	21	28	8	7	17	26	34	32	28	38	...	19.3*	
Boonton§§.....	Maximum...	18	22	28	14	4	36	48	31	38	36	40	50	47	46	53	30	26	30	55	51	15	22	34	48	56	39	45	49	...	36.1	
	Minimum...	12	-13	-10	10	-8	-7	2	21	10	19	24	29	34	19	21	18	20	11	15	26	6	4	0	13	27	32	26	28	...	13.9	
Elizabeth.....	Maximum...	27	22	27	29	9	35	51	44	35	36	43	51	50	48	55	42	30	35	39	57	40	25	30	56	59	50	49	48	...	40.4	
	Minimum...	10	-8	5	9	-10	-4	32	24	16	24	30	30	37	24	36	19	23	13	22	37	8	6	7	24	30	34	26	34	...	19.2	
Flemington.....	Maximum...	25	23	25	27	8	33	51	40	35	37	40	49	48	50	52	37	29	34	37	55	33	25	39	50	56	48	47	48	...	38.6	
	Minimum...	5	-15	0	5	-8	-7	28	21	17	25	26	25	38	25	34	20	22	11	23	33	10	8	0	18	32	34	27	34	...	17.5	
Highwood.....	Maximum...	20	23	27	27	4	31	48	40	36	37	38	45	45	44	52	33	29	31	40	54	27	22	36	49	53	49	42	45	...	36.7	
	Minimum...	2	-13	3	1	-8	-3	29	15	11	24	28	32	33	24	32	21	20	12	22	26	8	6	0	25	31	30	26	34	...	16.8	
Jersey City.....	Maximum...	26	20	31	30	5	35	49	42	35	36	40	47	49	44	56	35	32	31	44	57	29	27	37	52	53	55	41	47	...	38.7	
	Minimum...	11	5	15	3	-6	1	35	22	19	26	29	36	40	41	31	35	22	22	16	26	29	9	8	16	30	35	34	29	...	21.9	
Lambertville.....	Maximum...	23	21	27	29	7	34	43	41	38	38	35	46	48	45	53	36	30	31	39	57	35	24	37	48	55	53	45	50	...	38.1	
	Minimum...	-11	3	5	-9	-6	28	21	18	25	27	28	32	32	23	23	18	19	10	23	32	10	7	2	20	31	33	27	35	...	17.2	
Little Falls.....	Maximum...	24	21	...	29	7	31	49	34	37	36	43	51	50	47	53	33	31	33	46	54	17	25	36	52	57	53	46	51	...	38.9*	
	Minimum...	-2	-10	2	-1	-2	0	27	15	15	24	31	36	25	26	24	20	17	13	24	16	7	6	7	24	31	...	29	...	16.4*		
Newark.....	Maximum...	19	19	30	30	4	32	49	45	36	36	39	49	48	45	55	34	27	29	47	56	15	25	36	52	57	50	44	46	...	37.6	
	Minimum...	12	4	13	9	-7	-2	32	25	15	25	32	34	41	31	34	21	21	15	32	13	8	7	16	28	41	32	29	38	...	21.0	
New Brunswick.....	Maximum...	25	20	27	28	8	35	49	47	35	37	41	50	49	47	55	41	38	32	41	59	35	24	38	51	57	52	46	48	...	39.8	
	Minimum...	13	-6	6	8	-8	-5	34	26	17	25	28	32	42	26	37	20	20	14	21	35	9	7	9	25	35	35	27	35	...	20.2	
Palisades Park.....	Maximum...	19	22	28	29	4	35	50	32	36	36	40	48	48	45	52	29	29	32	43	55	17	24	37	55	55	50	43	45	...	37.1	
	Minimum...	1	-7	6	-2	-8	-2	32	11	11	24	28	33	28	21	24	20	18	11	21	15	7	7	4	28	34	30	27	36	...	16.4	
Paterson.....	Maximum...	29	24	27	27	7	31	52	44	35	38	42	50	50	47	56	41	30	34	40	56	32	22	36	53	57	48	46	49	...	39.4	
	Minimum...	15	-1	18	5	-7	-2	...	22	16	24	31	33	38	25	37	21	23	14	23	32	8	6	9	26	31	34	28	34	...	20.1*	
Plainfield.....	Maximum...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Minimum...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Somerville.....	Maximum...	20	22	24	27	7	35	50	45	36	37	46	50	47	49	54	40	31	36	37	58	35	23	40	51	58	51	48	51	...	39.6	
	Minimum...	4	-16	2	5	-8	-9	28	22	11	23	22	22	33	21	34	19	21	8	18	34	9	6	-1	15	27	34	25	32	...	15.9	
South Orange.....	Maximum...	23	21	29	29	4	32	49	45	36	36	41	48	47	44	53	29	29	32	40	57	22	26	36	50	54	50	45	47	...	37.6	
	Minimum...	9	-2	9	2	-7	0	32	20	18	25	31	32	32	26	24	21	21	14	27	21	8	7	9	26	34	32	29	36	...	19.1	
New York, N. Y.....	Maximum...	25	21	34	29	4	37	50	33	37	36	40	51	48	46	54	32	31	31	46	58	17	28	36	52	56	51	40	48	...	38.2	
	Minimum...	10	6	17	-1	-7	1	33	21	26	25	31	35	36	34	23	21	19	15	27	17	8	7	16	31	42	32	28	38	...	21.1	
<i>The Southern Interior.</i>																																
Bridgeton.....	Maximum...	22	25	38	35	10	40	55	33	37	43	44	53	53	53	63	40	35	36	50	58	34	34	43	55	62	53	52	62	...	43.7	
	Minimum...	5	4	20	10	-8	-3	35	27	22	28	28	31	37	31	40	25	27	15	26	34	15										



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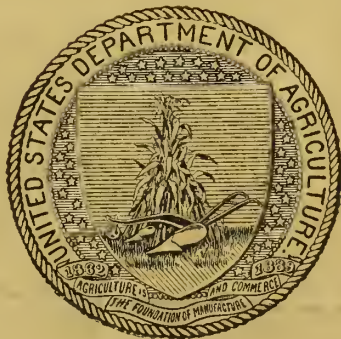
NEW JERSEY SECTION

MARCH, 1918.

BY

G. HAROLD NOYES

METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
APRIL 13, 1918.

Departure of the Mean Temperature from the Normal, March, 1918.



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

VOL. XXIII. TRENTON, N. J., MARCH, 1918. No. 3.

GENERAL SUMMARY.

The weather for the month of March was remarkably fine in practically all respects. Warm and clear days were in excess of normal, and rain, snow, cloudiness and wind were less than normal. This moderation of the elements was the more noticeable by reason of the contrast with the unusual severity of the past winter. Temperatures had been below normal with great persistence from September to the last week in February, and March was the first month in that period to rise above normal. Frost which had penetrated into the ground to unusual depths worked out very rapidly, and in central and southern districts, the soil was suitable for plowing and early planting. Even though precipitation had been subnormal, the Delaware River averaged slightly above the monthly normal, due principally to the melting of the great accumulations of ice in the headwaters. The lowest barometer reading of the month occurred on the 10th, and with it a gale of 60 to 70 miles per hour, and was followed by the highest pressure of the month on the 11th. The damage to highways from frost and heaving became apparent during the month, and proved to be greater than heretofore.

The mean daily stage of the Delaware River at Phillipsburg was 6.4 feet, the highest being 8.4 feet on the 15th. At Trenton the mean daily stage was 4.3 feet, which was 0.4 foot above normal; the highest stage was 5.9 feet on the 4th.

The temperature departure from normal for the year 1918 to date, by sections is: The Highlands, -2.4° ; Red Sandstone Plain, -2.3° ; Southern Interior, -1.9° ; Seacoast, -2.8° . The precipitation accumulated departure for the year 1918 to date, by sections is: The Highlands, -2.81 ; Red Sandstone Plain, -3.97 ; Southern Interior, -2.90 ; Seacoast, -3.71 . Storm warnings were displayed along the coast on the 3d, 9th, 10th, 12th, 14th, 15th, 17th, and 18th.

TEMPERATURE.

The mean monthly temperature of the State as deduced from observations of 36 stations was 41.8° , which was 3.8° above normal. The highest temperature was 82° at Belvidere on the 19th, and the lowest, zero at Culvers Lake on the 11th. The highest monthly mean temperature was 45.5° at Bridgeton, and the lowest, 38.6° at Charlotteburg. The greatest daily range of temperature was 50° at Somerville on the 19th. Mean minima were very near to 32° in southern counties and along the shore, but were considerably below freezing elsewhere.

PRECIPITATION.

The average total precipitation of the State, as deduced from observations of 41 stations was 2.06 inches, which was 1.96 inches below normal. The average total snowfall was 0.7 inch, which was 5.2 inches below normal. Practically the only measurable amounts of snow occurred in the northern half of the State, and fell mostly on the 5th and 7th. The greatest monthly amount of precipitation was 3.76 inches at Bridgeton, and the least, 0.99 inch at Newton. The greatest amount of precipitation in any 24 consecutive hours was 1.60 inches at Belvidere on the 14th. The precipitation occurred with consistent frequency the first half of the month, being oftener than every other day, and thereafter on the 21st-22d, and 25th. The average number of days on which 0.01 inch or more precipitation occurred was 9, which was 2 less than normal.

WIND.

The prevailing wind direction was from the northwest, with an approximate velocity of 14 miles per hour, which was slightly less than normal. The highest velocity sustained for 5 consecutive minutes was 78 miles per hour from the northwest at Long Branch on the 10th. High winds were reported also on the 3d and 15th.

SUNSHINE AND CLOUDINESS.

The average number of clear days throughout the State was 17, which was 6 above normal; partly cloudy, 7, or 2 below normal; cloudy, 7, or 4 below normal. The average percent. of possible sunshine approximated 65, which was appreciably above normal.

MISCELLANEOUS.

Atmospheric pressure, reduced to sea level, averaged 30.02 inches, which was 0.01 inch above normal. Sleet was reported in scattered portions of the State on the night of the 4th-5th, 7th, 14th, and 15th. Thunder storms occurred on the 6th and 14th. A very notable display of the aurora occurred on the night of the 7th-8th. A solar halo was observed on the 30th. Dense fog was reported on the 1st, 5th, 10th, 13th, 14th, 20th, 21st, and 22d.

COMPARATIVE DATA FOR MARCH.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more prec.
1885.....	30.4	66	2	1.10	2.29	0.23				
1886.....	37.7	70	9	3.70	5.27	2.59				
1887.....	37.7	61	8	3.34	5.45	2.19			13	10
1888.....	32.8	72	0	5.71	8.22	3.75			12	11
1889.....	40.5	67	19	3.79	6.49	1.98			13	8
1890.....	37.6	78	0	6.08	7.92	4.14			13	14
1891.....	37.2	68	4	5.06	8.02	2.05	8	10	13	12
1892.....	34.4	64	6	4.75	7.21	3.11	10	12	9	9
1893.....	37.0	68	6	3.73	6.26	2.36	10	10	11	10
1894.....	44.2	83	12	1.77	2.65	1.09	12	11	8	10
1895.....	36.7	72	7	3.16	4.66	1.77	12	8	11	10
1896.....	34.0	69	1	5.34	7.38	3.14	13	8	10	11
1897.....	40.0	77	18	2.78	4.32	1.55	11	9	11	10
1898.....	45.1	77	16	3.33	4.25	2.56	9	10	12	12
1899.....	38.6	73	13	6.54	9.58	3.45	7	10	11	15
1900.....	35.6	67	9	3.51	4.96	2.48	12	12	7	10
1901.....	39.2	75	8	4.64	8.07	2.40	9	10	12	12
1902.....	43.9	77	0	4.34	7.20	3.16	12	10	9	11
1903.....	47.6	79	13	5.13	8.53	3.60	11	8	12	16
1904.....	37.2	72	1	3.43	4.76	2.02	11	8	12	13
1905.....	39.8	82	7	3.95	5.66	2.80	14	8	9	12
1906.....	34.4	67	15	5.09	6.77	2.91	10	9	12	11
1907.....	41.2	88	11	3.04	4.38	1.81	13	10	8	10
1908.....	41.8	89	7	2.80	4.92	1.06	11	9	11	12
1909.....	38.3	74	6	3.48	4.66	2.31	12	10	9	13
1910.....	44.5	88	10	1.22	2.36	0.29	14	10	7	6
1911.....	37.6	76	3	3.38	4.50	2.64	10	12	9	11
1912.....	36.9	72	3	7.61	9.61	5.95	9	11	11	14
1913.....	44.8	79	1	5.15	7.73	2.47	10	9	12	12
1914.....	35.4	75	6	3.65	6.45	2.02	13	10	8	10
1915.....	36.1	63	6	1.13	1.65	0.58	20	7	4	3
1916.....	31.7	71	9	3.48	4.96	2.38	13	8	10	12
1917.....	38.2	72	0	4.65	7.14	2.28	12	8	11	13
1918.....	41.8	82	0	2.06	3.76	0.99	17	7	7	9

ERRATA.

JANUARY, 1917.—Newark; number of days with precipitation 12, should read 13; Somerville; greatest precipitation in 24 hours 0.98, should read 0.99; Asbury Park; number of clear days 1, should read 9; Dover; mean maximum temperature 25.8 should read 35.8.

FEBRUARY, 1917.—Comparative Data for February, page 11, 1917, least precipitation 1.18, should read 0.92; Tuckerton; mean minimum temperature 20.8, should read 20.0.

MARCH, 1917.—Comparative Data for March, page 19, 1899, lowest temperature 3, should read 13; Culvers Lake; number of clear and cloudy days, 6 and 0, should read, respectively, 16 and 10.

MAY, 1917.—Comparative Data for May, page 35, 1916, number of partly cloudy, cloudy and days with .01 or more precipitation, 12, 11, and 8, should read, respectively, 11, 8, and 12; Indian Mills; total precipitation 3.4, should read 3.45.

JUNE, 1917.—Lakewood; mean temperature 69.4, should read 69.2, and departure from normal +1.8, should read +1.6; Lakewood; maximum temperature on the 13th 77, should read 72, and the mean maximum temperature 80.6, should read 80.4.

Climatological data for March, 1918.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation 0.1 in. or more.	Clear.	Pt. cloudy.			Cloudy.
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	27	41.5 ^a	+4.7	82	19	12	11	49	2.70	-1.31	1.60	1.5	5	24	3	4	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	26	38.6 ^f	+3.9	73	19	12	16	44	2.02	-1.92	0.97	2.0	6	21	8	2	nw.	George S. Briggs.
Culvers Lake ^{††}	Sussex.....	848	17	.....	.....	.....	.....	0	11	.....	1.90	-1.53	0.65	5.1	8	20	6	5	se.	Brice E. Riker.
Dover.....	Morris.....	600	34	39.8 ^a	+4.9	77	19	13	11	40	1.83	-2.07	0.79	1.0	8	8	15	8	.....	William C. Harris.
Layton.....	Sussex.....	480	18	38.8	+4.6	74	31	9	8	45	1.19	-2.48	0.56	4.5	8	21	3	7	nw.	A. M. Depue.
Newton.....	Sussex.....	769	37	39.0	+3.2	75	19	11	10 [†]	41	0.99	-2.61	0.44	2.2	6	18	5	8	sw.	Irving G. Kern.
Phillipsburg.....	Warren.....	363	36	41.0	+3.1	78	19	14	11	43	1.69	-1.96	0.89	1.6	9	19	6	6	nw.	D. Wilson Smith.
Means and extremes...				39.8	+4.1	82	19	0	11	49	1.76	-1.99	1.60	2.6	7	19	6	6	nw.	
<i>The Red Sandstone Plain.</i>																				
Bergen Point ^{††}	Hudson.....	37	21	40.2 ^a	+2.4	.....	.....	16	11	.....	1.37	-2.85	0.54	T.	7	8	17	6	nw.	William H. Mitchell.
Boonton.....	Morris.....	400	28	39.8	.....	76	19	14	8	42	1.58	-2.16	0.78	1.0	8	24	3	4	nw.	J. W. Demmers.
Chatham.....	Morris.....	330	16	.....	.....	.....	.....	.....	.....	.....	1.76	-2.11	0.57	.....	7	21	9	1	.....	Paul Molitor.
Elizabeth.....	Union.....	45	39	42.8	+4.4	80	19	15	11 [†]	45	1.60	-2.66	0.62	0.7	9	16	9	6	nw.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	30	42.8	+5.3	80	19	14	11	45	1.71	-1.90	0.81	T.	10	20	6	5	sw.	Hiram E. Deats.
Highwood.....	Bergen.....	90	29	39.8	+3.6	73	19	15	11	40	1.60	-2.55	0.61	1.3	8	14	10	7	sw.	Charles J. Bates.
Jersey City.....	Hudson.....	10	19	42.3	+4.1	76	19	17	11	37	1.79	-2.31	0.84	1.6	10	17	8	6	sw.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	31	42.0	+3.0	76	22	15	11	39	1.70	-2.41	.....	T.	9	19	7	5	sw.	Thomas R. Hunt.
Little Falls.....	Passaic.....	180	15	41.6	.....	74	19 [†]	16	11	36	1.61	-2.38	0.80	.....	10	21	0	10	w.	Montclair Water Co.
Newark.....	Essex.....	159	76	41.8	+4.3	79	19	16	11	40	1.32	-2.61	0.78	1.2	10	19	5	7	nw.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	110	65	42.6	+4.4	75	19	16	11	39	1.77	-2.14	0.87	0.8	10	18	7	6	nw.	N. J. Experiment Station.
Pailsades Park.....	Bergen.....	80	3	40.0	.....	77	19	15	11	42	1.65	.....	0.75	0.8	8	13	11	7	nw.	George P. Kirsten.
Paterson.....	Passaic.....	80	47	43.0	+4.5	79	19	16	11	42	1.08	-3.15	0.43	1.0	7	6	6	19	nw.	Marion T. Probert.
Pompton Plains.....	Morris.....	195	16	.....	.....	.....	.....	.....	.....	.....	1.81	-2.23	0.59	3.0	7	.....	.....	.....	.....	M. S. Taylor.
Somerville.....	Somerset.....	60	36	42.4	+5.5	77	19	15	4 [†]	50	1.91	-2.04	0.96	0.3	9	20	6	5	nw.	A. A. Macdonald.
South Orange.....	Essex.....	200	48	41.4	+4.6	74	19	16	11	38	1.58	-2.23	0.75	T.	8	21	5	5	w.	Dr. W. J. Chandler.
New York, N. Y.....		365	48	41.2	+3.7	74	19	16	11	35	1.51	-2.59	0.63	0.6	11	9	11	11	nw.	U. S. Weather Bureau.
Means and extremes...				41.6	+4.2	80	19	14	8 [†]	50	1.62	-2.38	0.96	0.8	9	17	7	7	nw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	37	45.5	+4.4	80	19	17	11	42	3.76	-0.71	1.20	0	11	22	1	8	nw.	Henry A. Jorden.
Burlington.....	Burlington.....	12	32	44.0	+4.1	77	19	17	11	40	2.35	-1.73	0.78	T.	10	23	2	6	nw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	26	44.2	+4.4	79	19	17	11	40	2.62	-1.36	1.09	T.	8	21	2	8	w.	W. Rex B. Sutch.
Hammonton.....	Atlantic.....	103	16	.....	.....	.....	.....	.....	.....	.....	3.38	-0.99	1.19	0	7	19	5	7	sw.	G. H. Parkhurst.
Hightstown.....	Mercer.....	120	26	42.8 ^a	+3.8	77	19	16	11	40	.....	.....	0.80	.....	.....	.....	.....	.....	.....	G. Franklin Eldridge.
Imlaystown ^{††}	Monmouth.....	185	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. B. Jones.
Indian Mills.....	Burlington.....	76	29	43.4	+3.6	80	19	11	16	45	3.08	-1.02	1.46	T.	10	15	9	7	nw.	James M. Armstrong.
Lakewood.....	Ocean.....	54	15	41.8	+1.8	75	19	13	16	43	2.41	-2.02	0.75	T.	7	15	6	10	w.	R. W. Hohnan.
Moorestown.....	Burlington.....	75	56	44.2	+5.4	78	19	16	11	40	2.57	-1.24	0.84	T.	8	18	8	5	sw.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	11	.....	.....	.....	.....	.....	.....	.....	2.48	-1.52	0.57	0	12	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	20	.....	.....	.....	.....	.....	.....	.....	2.59	-1.31	0.80	.....	12	18	3	10	.....	Lucien Van Gilder.
Trenton.....	Mercer.....	190	47	41.8	+2.7	76	19	16	11	42	2.02	-2.02	0.76	0.1	12	13	9	9	sw.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	25	42.2	+3.2	77	19	13	16	39	2.51	-1.88	.....	T.	8	19	4	8	nw.	Frank R. Austin.
Vineland.....	Cumberland.....	109	50	45.0	+4.7	77	19	17	11	39	2.64	-1.52	1.20	T.	10	18	6	7	sw.	H. C. Himes.
Woodbine.....	Cape May.....	43	27	44.4 [†]	+4.3	74	19	15	11 [†]		2.42	-1.66	0.80	0	11	21	3	7	w.	Baron de Hirsch Agr. Sch.
Philadelphia, Pa.....		117	48	44.4	+4.4	78	19	18	11	38	2.30	-1.15	0.82	T.	12	13	9	9	nw.	U. S. Weather Bureau.
Means and extremes...				43.6	+3.9	80	19	11	16	45	2.68	-1.46	1.46	T.	10	18	5	8	nw.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	29	41.4 [†]	+3.1	71	19	16	11	37	2.19	-2.11	0.76	T.	11	17	10	4	w.	Wilbur H. Pancoast.
Atlantic City.....	Atlantic.....	16	45	41.2	+2.4	76	69	18	11	36	2.36	-1.37	0.75	T.	13	12	9	10	sw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	34	42.8	+2.0	75	19	21	11	34	3.48	-0.25	0.96	T.	12	13	12	6	n.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	11	38.8	+0.6	74	19	14	11 [†]	40	1.61	-2.90	0.51	T.	13	14	10	7	nw.	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	20	40.2	-3.5	71	19	20	11	34	1.69	-3.09	0.60	T.	13	15	10	6	nw.	U. S. Weather Bureau.
Means and extremes...				40.9	+2.3	76	19	14	11 [†]	40	2.27	-1.94	0.96	T	12	14	10	7	nw.	
For the State.....				41.8	+3.8	82	19	0	11	50	2.06	-1.96	1.60	0.7	9	17	7	7	nw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

* Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Imlaystown is Cream Ridge.

Daily precipitation for March, 1918.

Stations.	Watersheed.	Day of month.																															Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
<i>The Highlands and Kittatinny Valley.</i>																																	
Belvidere.....	Delaware.....					.14		.57			.26				1.60												.13						2.70
Charlotteburg.....	Passaic.....				T.	.05		.06		*	.28				.97												.06						2.02
Culvers Lake.....	Delaware.....	.02				.10		.55		.02	.31				.65	.20											.05						1.90
Dover.....	Passaic.....				.01	*		.76		*	.20			.02	.79												.05	T.					1.82
Layton.....	Delaware.....	.04				.09	T.	.56		.05	.13				.21	.07											.04						1.19
Newton.....	Delaware.....	T.				.09	T.	.44		.10	.16		T.		.16	T.											.04						0.99
Phillipsburg.....	do.....	T.			.07	.04	T.	.40		.16	.07		T.	.13	.76	T.							.04				.02	T.					1.09
Sussex.....	Hudson.....																																
<i>The Red Sandstone Plain.</i>																																	
Bergen Point.....	Coast.....	T.				.18	.03	.02		.28	T.			.14	.54							T.	.18					T.					1.37
Boonton |||.....	Passaic.....		.02			.13		.44	.01		.19	T.		.01	.58	.20												T.		T.			1.58
Chatham |||.....	do.....					.16		.31	.04		.28			.03	.57	.37												T.		T.			1.76
Elizabeth.....	Coast.....	.03				.20	.05	.26		*	.34			.05	.62								.05					T.					1.60
Flomington.....	Raritan.....	.02				.15	.04	.20		.11	.16		.04	T.	.81	.10							.08				T.						1.71
Highwood.....	Hackensack.....	.01				.22	T.	.39		.10	.24		.01		.61								.02										1.60
Jersey City**.....	Coast.....	.01			T.	.20	.01	.32		*	.30		.01		.84								.10				T.						1.79
Lambertville.....	Delaware.....					.08	.24		*	.31		.09		*	.80								.18				T.						1.70
Little Falls**.....	Passaic.....	.02			.06	.07	.05	.40		.07	.12		.02	.05	.75								T.				T.						1.61
Newark **.....	Coast.....	.02			.05	.07	.03	.15	.06	*	.15		.01	.08	.70								T.				T.						1.32
New Brunswick.....	Raritan.....	.03				.18	.04	.19		.02	.20		.02		.84	.03							.22				T.	T.					1.77
Palisades Park.....	Hackensack.....	.02				.18		.34		.08	.23		.01		.75								.04				T.						1.65
Paterson.....	Passaic.....	.02				.12	T.	.43		.02	.12		.02		.35								T.										1.08
Plainfield **.....	Raritan.....																																
Pompton Plains |||.....	Passaic.....		.04			.09		.56	.04		.21				.59	.28											T.						1.81
Somerville.....	Raritan.....	T.				.17	*.04	.24		.06	.14		.13	T.	.96	.12							.05										1.91
South Orange.....	Rahway.....				T.	*	*	.50		*	.30		.03	*	.75								T.				T.		T.				1.58
New York, N. Y***.....	Coast.....	.01			.16	.06	.08	.18		.06	.19		.01	.07	.56								T.	.13			T.						15.1
<i>The Southern Interior.</i>																																	
Bridgeton.....	Coast.....	.04				.50		.50		.15			.10	.10	*	1.00						*	1.20				.17						3.76
Burlington.....	Delaware.....	T.				.20		.03		.11	.05		.10		.78	.18						*	.77			.13	T.						2.35
Clayton.....	Maurice.....				.20	.04	.34		T.	T.		.16	T.	.21	.58							.01	1.08					T.					2.62
Hammononton.....	Mullica.....	T.			.30		.51				.22		.84	.24									1.19			.08							3.38
Hightstown.....	Raritan.....	.01			\$		.30		.05	.14		.06		.80	.15								.30			\$							\$
Imlaystown.....	Delaware.....				*		.50		*	*		*		.92									.53										\$
Indian Mills.....	Mullica.....	.02			.10	.15	.28		.06		.10		.10		.51	.32							1.46			.08	T.						3.08
Lakewood.....	Metedeconk.....	T.			.18	T.	.44		T.	.04		T.		.75	.23								.75			.02	T.						2.41
Moorestown.....	Delaware.....		.17		.44		.44		.03	.05	.08		.84										.84			.12	T.						2.57
Northfield.....	Coast.....	.02			.68		.41		.01	.03		.10	.04	.57	.21							.05	.20			.16							2.48
Pleasantville.....	Coast.....	.02			T.	.68		.25		.02	.01		.10	.10	.80	.13						.01	.32			.15	T.						3.59
Trenton***.....	Delaware.....	.01		.10		.02	.13		.07	.09	.03	.25	.54		.36	.36						.36	.36			.06	T.						2.62
Tuckerton.....	Coast.....	*			.20		*		T.		*	*	.98	.53									.80				T.						2.51
Vineland.....	Maurice.....	.01			.44		.53		.02		.21		.06	.06		*	1.20								.11	T.							2.64
Woodbine.....	Coast.....	.05			.40		*		.20		.15	.15	.30	.15								.12	.80			.10							2.42
Philadelphia, Pa..	Delaware.....	T.			.14	.01	.13	.25		.04	.04		.08	.32	.53							.47	.13			.16	T.						2.30
<i>The Sea Coast.</i>																																	
Asbury Park.....	Coast.....	T.			.14	.06	.09	.36		.04	.08		.06	.16	.60							.15	.45				T.						2.19
Atlantic City***.....	do.....	.01			.48	.27	.03	.26		.01	.04		.09	.39	.33							.12	.20			.13	T.						2.36
Cape May City.....	do.....	.01		.72	T.	.19		.02	T.		.17	.29	.72	.10		.96	.08					.21	.08			.21	T.						3.18
Long Branch**.....	do.....	.10		.15	.02	.02	.16		.29	T.		.01	.19	.14	.01		.01	.50							.01	T.							1.61
Sandy Hook***.....	do.....	.01		.14	.04	.20	.10	.04		.04	.05		.02	.10	.52							.02	.44			.01	T.						1.69

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded.
 || Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.
 * Precipitation included in the next following measurement. **Precipitation for 24-hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

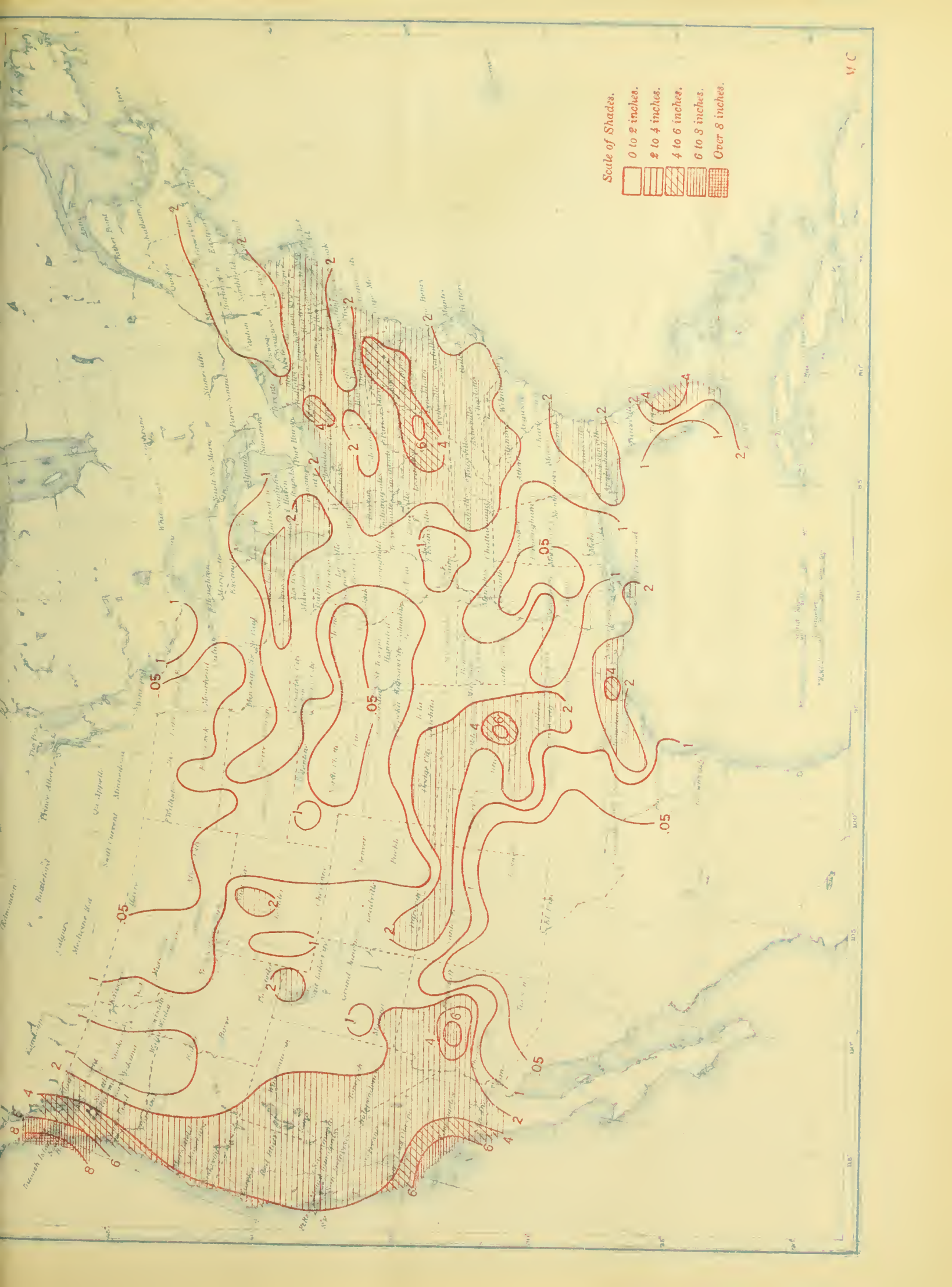
Stations.	Pressure.					Hourly velocity.	Wind.			Moisture.		Sun- shine
	Monthly mean.	Highest.	Date.	Lowest.	Date.		Highest.			Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	
							Miles per hour.	Direction.	Date.			
Atlantic City.....	30.04	30.60	11	29.48	10	8	35	nw.	10	79	75	64
Cape May City.....	30.05	30.62	11	29.54	10	10	48	nw.	10			
Long Branch.....	30.03	30.56	11	28.40	10	19	78	nw.	10	70	66	64
Newark.....							40	nw.	3	68*	59†	67
New York, N. Y.....	30.00	30.54	11	28.42	10	20	87	nw.	10	65	54	62
Palisades Park.....	30.00	30.48	11	28.43	10							
Philadelphia, Pa.....	30.03	30.63	11	29.44	10	11	47	nw.	10	80	77	66
Sandy Hook.....	30.00	30.57	11	29.41	10	17	71	nw.	10	78	72	67
Trenton.....	30.00	30.55	11	29.42	10	13	64	nw.	10	77	63	62

§ Two directions and dates

* 7 a. m. † 9 p. m.

Daily temperatures for March, 1918.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean	
<i>The Highlands and Kittatinny Valley</i>																																	
Belvidere.....	Maximum ...	45	51	46	40	53	60	49	49	40	40	48	57	36	40	50	60	82	70	71	76	67	57	59	50	48	55	64	68	74	55.3 ^b		
	Minimum.....	32	30	32	18	31	31	26	16	20	21	12	25	35	33	24	16	28	32	33	32	36	44	43	22	28	25	24	24	26	34	27.7	
Charlotteburg.....	Maximum.....	38	50	50	27	49	58	38	34	37	45	...	41	52	34	37	46	58	54	73	60	64	69	47	55	51	46	40	48	57	65	49.8 ^b	
	Minimum.....	40	50	...	35	52	62	40	45	43	48	36	45	54	42	38	...	60	58	77	62	69	73	50	55	56	43	45	49	60	62	72	52.4 ^b
Dover.....	Maximum.....	32	26	23	16	31	31	22	15	34	15	13	27	38	31	17	14	28	33	37	33	33	42	32	23	29	27	24	23	27	28	29	27.2
	Minimum.....	45	51	45	36	53	55	46	46	43	45	37	46	52	43	38	47	61	51	72	72	62	71	56	56	41	45	52	60	64	74	52.3	
Layton.....	Maximum.....	32	23	28	15	29	32	24	9	29	18	13	22	39	32	20	11	29	31	28	29	30	41	30	19	36	21	22	22	22	29	25.4	
	Minimum.....	40	47	43	34	50	61	45	42	40	36	34	45	50	45	38	44	57	54	75	69	70	72	58	53	54	45	42	46	55	63	70	50.9
Newton.....	Maximum.....	32	25	27	16	28	34	22	14	32	11	11	21	40	31	19	13	35	31	34	31	38	46	30	22	32	26	22	27	30	39	27.1	
	Minimum.....	44	51	43	38	52	61	38	48	46	48	40	54	38	59	48	60	59	78	67	69	73	50	56	57	39	46	53	60	67	74	53.0	
Phillipsburg.....	Maximum.....	33	28	26	20	30	32	24	21	35	17	14	28	38	33	20	18	31	33	35	33	38	43	33	25	34	29	26	25	29	37	28.9	
	Minimum.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sussex.....	Maximum.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Minimum.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<i>The Red Sandstone Plain.</i>																																	
Bergen Point.....	Maximum ...	44	50	42	47	...	55	41	47	48	48	37	48	44	40	47	...	58	...	55	67	70	55	55	55	42	47	55	52	...	72	51.0 ₄	
	Minimum.....	35	...	28	20	32	28	28	22	32	21	16	27	44	32	22	18	28	35	...	34	34	...	36	28	34	32	...	27	30	27	40	29.3 ₄
Boonton§§.....	Maximum.....	43	51	40	37	51	61	37	44	48	52	36	50	55	42	43	47	57	57	76	64	71	73	51	54	57	43	44	50	59	65	69	52.5
	Minimum.....	33	25	32	16	23	30	27	14	23	33	15	18	29	31	15	22	31	31	34	33	30	38	34	21	32	23	25	26	23	36	27.0	
Elizabeth.....	Maximum.....	45	53	46	41	57	56	51	49	48	50	39	48	58	47	44	48	65	60	65	70	78	65	58	63	49	48	53	56	68	75	55.7	
	Minimum.....	35	28	35	19	31	33	30	27	30	32	23	15	26	44	33	27	15	27	33	35	35	34	49	35	26	36	30	23	25	26	27	29.9
Flemington.....	Maximum.....	45	51	45	38	57	59	53	50	47	48	41	47	55	47	40	50	61	62	80	71	66	75	67	57	59	48	49	51	61	69	75	55.5
	Minimum.....	30	23	35	20	33	32	30	20	34	26	14	26	38	34	27	16	30	30	35	35	37	50	35	25	38	32	27	27	32	30	35	30.2
Highwood.....	Maximum.....	41	50	42	37	53	55	36	45	44	44	38	46	51	45	40	47	61	56	73	53	66	70	55	54	59	44	45	48	56	65	71	51.4
	Minimum.....	31	28	29	17	31	35	26	17	28	20	15	25	41	33	20	16	28	34	33	31	30	48	35	23	36	30	23	23	25	25	40	28.3
Jersey City.....	Maximum.....	44	50	43	36	53	55	44	45	46	48	35	48	55	45	42	46	64	58	76	56	64	65	59	52	60	42	47	51	54	60	66	51.9
	Minimum.....	35	31	34	23	32	39	30	26	37	20	17	32	40	34	23	19	31	38	37	37	37	49	38	31	38	33	29	28	34	34	45	32.7
Lambertville.....	Maximum.....	51	48	46	38	54	53	58	46	52	36	47	53	51	44	47	53	51	74	58	69	74	58	69	74	51	54	58	47	53	66	74	54.3
	Minimum.....	33	25	34	17	32	36	30	20	34	24	15	27	43	34	26	16	29	34	35	32	37	48	33	22	36	28	25	26	26	29	38	29.8
Little Falls.....	Maximum.....	45	49	49	40	54	60	40	47	47	53	39	48	56	40	43	48	61	57	74	58	69	74	51	54	58	42	46	50	56	65	71	53.0
	Minimum.....	33	29	17	26	32	34	25	18	32	19	16	26	40	34	19	17	37	36	39	36	34	48	35	36	36	29	27	26	26	29	44	30.2
Newark.....	Maximum.....	44	50	45	37	53	57	36	47	45	49	37	46	54	38	40	47	60	59	79	58	67	74	52	55	58	40	46	50	53	65	72	52.0
	Minimum.....	35	31	26	21	34	34	27	25	37	18	16	31	38	33	19	18	31	38	30	35	37	47	37	30	37	31	29	28	35	33	44	31.5
New Brunswick.....	Maximum.....	44	50	49	40	54	57	55	48	48	50	38	49	55	49	41	45	62	60	75	65	60	73	68	53	57	58	45	48	53	65	72	53.9
	Minimum.....	34	29	34	20	32	36	29	22	34	26	16	29	44	33	28	18	30	37	36	35	34	50	36	26	37	30	25	27	30	31	40	31.2
Palisades Park.....	Maximum.....	43	50	43	35	54	57	35	47	43	47	38	46	52	38	40	48	61	57	77	55	68	70	53	53	58	43	45	49	55	65	72	51.5
	Minimum.....	32	28	26	17	32	32	23	17	31	18	15	28	38	31	18	17	31	36	35	33	31	45	32	25	35	29	24	25	29	27	42	28.5
Paterson.....	Maximum.....	43	54	46	38	56	60	55	48	44	47	40	47	55	48	47	50	63	60	79	60	71	75	63	58	61	50	45	52	59	69	74	55.2
	Minimum.....	35	29	33	20	31	36	29	20	31	22	16	27	43	32	25	17	32	36	37	34	34	50	37	27	39	32	26	26	29	29	43	30.9
Plainfield.....	Maximum.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Minimum.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Somerville.....	Maximum.....	44	51	45	39	55	59	55	49	48	47	39	47	57	47	41	49	63	59	77	66	67	74	64	54	50	47	46	50	57	67	73	57.5
	Minimum.....	32	27	33	15	29	30	29	17	20	20	16	21	36	32	27	15	27	34	27	33	31	49	34	20	36	27	25	22	24	25	33	27.3
South Orange.....	Maximum.....	44	49	44	41	53	57	37	42	46	50	37	46	55	42	43	47	60	57	74	56	67	73	51	54	56	48	45	48	52	64	71	51.9
	Minimum.....	34	29	30	21	32	35	29	23	34	19	16	28	42	33	20	18	30	36	36	34	37	50	36	29	38	31	24	26	34	30	41	30.8
New York, N. Y.....	Maximum.....	43	48	42	35	55	58	38	48	48	49	36	49	53	38	42	46	59	55	74	55												



Scale of Shades.

- 0 to 2 inches.
- 2 to 4 inches.
- 4 to 6 inches.
- 6 to 8 inches.
- Over 8 inches.

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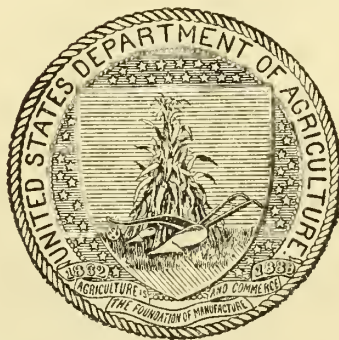
U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU
CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

APRIL, 1918.

BY
G. HAROLD NOYES
METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
MAY 21, 1918.

Departure of the Mean Temperature from the Normal, April, 1918.



Shaded portions show excess (+).
 Unshaded portions show deficiency (-).
 Lines show amount of excess or deficiency.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

VOL. XXIII.

TRENTON, N. J., APRIL, 1918.

No. 4.

GENERAL SUMMARY.

The weather during April was mostly pleasant and agreeable, except for one notably stormy period from the 8th to the 13th when there occurred almost constant rain, sleet or snow, and for a marked prevalence of northeasterly winds. Variations from normal of heat, moisture and cloud cover were unimportant. There was a little more cloudiness than normal for the whole month, and the number of days with appreciable precipitation as well as the amount, slightly exceeded normal, so that to many it seemed to be more stormy than April usually is. In 1898 and this year the extreme highest temperature for the State was 81°, and in all other years since 1885, this reading has been exceeded. The lowest temperature, 18°, was not severely low, when compared with 10° that occurred in 1894, and 12° in 1896. There never has been an April on record when freezing temperature did not occur. The accumulated deficiency of temperature from the record breaking cold of winter has been nearly overcome, and although the accumulated precipitation is slightly subnormal, the stock of ground water is not deficient.

The mean daily stage of the Delaware River at Phillipsburg was 5.5 feet, the highest being 9.6 feet on the 23d. At Trenton the mean daily stage was 3.6 feet, which was 0.4 foot below normal. The highest stage was 5.7 feet on the 23d.

The temperature departure from the normal for the year 1918 to date, by sections is: The Highlands, -1.6°; Red Sandstone Plain, -1.5°; Southern Interior, -1.1°; Seacoast, -2.2°. The precipitation accumulated departure from normal for the year 1918 to date is: The Highlands, -1.15 inches; Red Sandstone Plain, -3.86 inches; Southern Interior, -2.41 inches; Seacoast, -3.45 inches.

Storm warnings were displayed along the coast from the 9th to the 12th, 17th, 18th, 21st, 26th, 28th, and 29th.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 35 stations, was 49.8°, which was 0.8° above normal. The highest temperature was 81° on the 2d, and subsequent dates at several stations, and the lowest, 18° at Culvers Lake on the 5th and 6th; the highest monthly mean temperature was 53.2° at Vineland, and the lowest, 46.6° at Long Branch. The greatest daily range of temperature was 46° at Belvidere and Layton on the 16th. Temperatures from the 9th to the 13th averaged some ten to fifteen degrees below normal.

PRECIPITATION.

The average total precipitation of the State, as deduced from observations of 42 stations was 4.05 inches, which was 0.52 inch above normal. The average total snowfall was 2.6 inches, which was 1.8 inches more than normal. The snowfall was limited to the period from the 10th to 13th, and in portions of the southern counties there was none. The principal dates of precipitation were the 3d-4th, from late on the 8th to the 13th, 17th-18th, 20th-22d, 24th, 29th, and 30th. The greatest amount was 5.79 inches at Newton, and the least 2.88 inches at Newark. The greatest amount in any 24 consecutive hours was 1.87 inches at Asbury Park on the 20th-21st. The average number of days on which 0.01 inch or more precipitation fell was 12, which was 2 more than normal.

SUNSHINE AND CLOUDINESS.

The average number of clear days throughout the State was 11, which was normal; partly cloudy, 8, which was 2 below normal; cloudy, 11, which was 2 more than normal. The average percent. of possible sunshine approximated 51, which was probably somewhat less than normal.

WIND.

The prevailing wind direction was from the northeast, which is not usual for New Jersey in April, with an approximate hourly velocity of 14 miles, which was a little above normal. The highest velocity, sustained for 5 consecutive minutes was 76 miles per hour from the northeast on the 11th, at Long Branch.

COMPARATIVE DATA FOR APRIL.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more prec.
1885.....	48.4	88	26	2.79	2.86	0.89	.....	.....	.....	.....
1886.....	50.6	86	27	3.40	5.48	1.86	.....	.....	.....	.....
1887.....	47.3	87	16	2.70	3.77	0.91	.....	.....	.....	.....
1888.....	47.9	82	22	3.28	4.68	1.89	.....	.....	.....	.....
1889.....	51.2	83	25	5.32	7.25	2.92	.....	.....	.....	.....
1890.....	50.4	86	21	2.65	4.58	1.39	.....	.....	.....	.....
1891.....	52.0	88	20	2.19	3.80	1.05	.....	.....	.....	.....
1892.....	49.3	87	19	2.49	4.41	1.05	.....	.....	.....	.....
1893.....	49.2	82	19	5.21	7.12	2.97	.....	.....	.....	.....
1894.....	50.3	88	10	3.06	4.86	1.71	.....	.....	.....	.....
1895.....	49.1	89	19	4.88	7.75	3.47	.....	.....	.....	.....
1896.....	52.4	98	12	1.35	2.39	0.64	.....	.....	.....	.....
1897.....	50.4	89	19	3.79	6.98	2.17	.....	.....	.....	.....
1898.....	47.8	87	13	3.74	4.94	2.17	.....	.....	.....	.....
1899.....	49.9	88	18	1.73	3.25	0.68	.....	.....	.....	.....
1900.....	50.8	82	18	2.29	3.03	1.59	.....	.....	.....	.....
1901.....	48.3	89	23	6.31	10.22	3.46	.....	.....	.....	.....
1902.....	50.2	93	20	3.62	5.99	2.45	.....	.....	.....	.....
1903.....	50.9	92	18	3.97	7.03	2.40	.....	.....	.....	.....
1904.....	46.7	85	16	3.42	4.71	2.00	.....	.....	.....	.....
1905.....	49.9	84	18	2.88	4.03	1.53	.....	.....	.....	.....
1906.....	51.2	87	17	3.64	6.42	1.17	.....	.....	.....	.....
1907.....	45.2	83	15	3.78	8.07	1.17	.....	.....	.....	.....
1908.....	51.2	93	13	2.72	3.86	1.42	.....	.....	.....	.....
1909.....	50.2	88	17	5.97	8.90	3.84	.....	.....	.....	.....
1910.....	53.5	88	15	5.34	7.56	3.43	.....	.....	.....	.....
1911.....	47.4	88	14	4.11	5.58	2.87	.....	.....	.....	.....
1912.....	50.4	82	18	3.56	6.02	1.81	.....	.....	.....	.....
1913.....	52.1	89	19	5.78	8.53	4.14	.....	.....	.....	.....
1914.....	48.4	89	15	3.67	4.78	2.35	.....	.....	.....	.....
1915.....	54.4	96	20	2.71	4.13	1.28	.....	.....	.....	.....
1916.....	48.2	85	20	3.32	6.14	0.90	.....	.....	.....	.....
1917.....	48.8	88	15	2.39	3.54	1.19	.....	.....	.....	.....
1918.....	49.8	87	18	4.05	5.79	2.88	.....	.....	.....	.....

ERRATA.

JULY, 1917.—Sunshine and Cloudiness and Comparative Data for July, page 51, number of clear days 10, should read 12; partly cloudy days 11, should read 10; cloudy days 10, should read 9; Somerville; total precipitation 4.39, should read 4.31; Lakewood; date of highest temperature 1, should read 31.

AUGUST, 1917.—New York; number of clear days 0, should read 9.

SEPTEMBER, 1917.—Boonton; mean temperature 58.4, should read 59.4; Elizabeth; departure from normal temperature -5.6, should read -4.6; Pompton Plains; total snowfall 5, should read 0; Tuckerton; date of highest temperature 26, should read 21.

OCTOBER, 1917.—Comparative Data for October, page 75, number of days with .01 inch or more precipitation in 1899 7, should read 6; Sandy Hook; total precipitation 5.5, should read 5.52.

NOVEMBER, 1917.—Belvidere; lowest temperature 66, should read 16.

DECEMBER, 1917.—Charlotteburg; greatest daily range 34, should read 38; Vineland; total precipitation 3.27, should read 2.27.

ANNUAL, 1917.—Comparative Annual Data, page 100, mean temperature for 1886 50.2, should read 51.0; Plainfield; total snowfall 52.2, should read 57.2; Northfield; total snowfall 15.9, should read 15.1; Belvidere; departure from normal precipitation in March -0.06, should read -0.56, and in November -2.65, should read -2.66; Newton; March, departure from normal precipitation -1.22, should read -1.32; Bergen Point; precipitation for May 5.24, should read 5.74; Elizabeth; precipitation for November 0.59, should read 0.56; Flemington; departure from normal precipitation in July +1.08, should read -1.08; Highwood; departure from normal precipitation for December -0.03, should read -0.08; New Brunswick; departure from normal precipitation for March -5.04, should read -0.04; Burlington; departure from normal precipitation for December -0.27, should read -0.77; Hightstown; departure from normal precipitation for November -3.22, should read -3.25; Indian Mills; departure from normal precipitation for September -0.20, should read +0.20; Dover; mean annual temperature 47.7, should read 46.7; Paterson; mean annual temperature 52.3, should read 50.7; Tuckerton; departure from normal temperature in December -9.1, should read -6.1; Atlantic City; departure from normal temperature for November -2.7, should read -3.7.

JANUARY, 1918.—Long Branch; lowest pressure 28.32, should read 28.82; Lambertville; mean maximum temperature, 27.0 i, should read 27.9 i; mean temperature, 19.0 h, should read 19.5 h, and departure from normal, -10.9.

FEBRUARY, 1918.—New Brunswick; total precipitation 2.96, should read 2.69.

Climatological data for April, 1918.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.				Prevailing direc- tion of wind.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation .01 in. or more.	Clear.	Pt. cloudy.			Cloudy.
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	27	50.5	+0.9	81	2	25	6	46	5.43	+2.16	.....	3.0	13	19	2	9	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	26	47.0	+0.3	75	2†	26	7	39	4.80	+0.87	.....	2.0	14	16	8	6	ne.	George S. Briggs.
Culvers Lake††.....	Sussex.....	848	17	.....	.....	.....	.....	18	5†	.....	4.93	+1.06	1.05	9.5	16	19	1	10	e.	Brice E. Riker.
Dover.....	Morris.....	600	34	48.0	+0.7	78	2	28	5†	37	4.60	+1.09	.....	6.5	14	5	14	11	.....	William C. Harris.
Layton.....	Sussex.....	480	18	47.4	+0.9	78	2	23	6	46	5.57	+2.26	1.14	4.5	16	13	3	14	ne.	A. M. Depue.
Newton.....	Sussex.....	769	37	48.0	+0.4	77	1	25	5	35	5.79	+2.58	1.23	7.5	13	11	8	11	ne.	Irving G. Kern.
Phillipsburg.....	Warren.....	363	36	49.7	+0.1	78	2	29	5†	39	4.60	+1.58	1.33	5.0	13	16	5	9	ne.	D. Wilson Smith.
Means and extremes.....				48.4	+0.6	81	2	18	5†	46	5.10	+1.66	1.33	5.4	14	14	6	10	ne.	
<i>The Red Sandstone Plain.</i>																				
Bergen Point††.....	Hudson.....	37	21	49.6 ^a	+1.1	78	16†	28	5	37	3.49	-0.40	1.58	5.0	10	11	10	9	se.	William H. Mitchell.
Boonton.....	Morris.....	400	§28	48.2	.....	74	16†	25	6	38	3.95	+0.19	0.95	4.0	13	19	1	10	ne.	J. W. Demmers.
Chatham.....	Morris.....	330	16	.....	.....	.....	.....	.....	.....	.....	3.93	+0.28	0.96	.....	14	10	11	9	.....	Paul Molitor.
Elizabeth.....	Union.....	45	39	51.4	+0.6	81	2	27	5†	38	4.13	+0.56	1.31	3.0	14	9	10	11	ne.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	30	50.8	+1.7	81	2	28	6	45	3.43	-0.01	1.06	4.0	10	16	5	9	e.	Hiram E. Deats.
Highwood.....	Bergen.....	90	29	48.6	+0.1	77	2	25	5†	41	3.44	+0.05	1.60	1.8	12	9	9	12	ne.	Charles J. Bates.
Jersey City.....	Hudson.....	10	19	50.9	+1.5	80	2	32	5†	34	4.58	+0.88	1.71	4.5	11	9	11	10	ne.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	31	49.6	-0.8	80	2	26	6	35	4.00	+0.60	1.14	5.0	11	6	15	9	e.	Thomas R. Hunt.
Little Falls.....	Passaic.....	180	§15	49.0 ^b	.....	78	2	28	6	37	3.76	+0.22	1.34	2.0	10	9	6	15	ne.	Montclair Water Co.
Newark.....	Essex.....	159	76	50.2	+1.1	79	2	31	11†	29	2.88	-0.85	0.96	4.5	14	14	3	13	ne.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	110	65	50.0	+0.3	78	2	30	5†	34	3.11	-0.68	1.13	2.5	12	12	9	9	e.	N. J. Experiment Station.
Palisades Park.....	Bergen.....	80	3	48.5	.....	79	2	28	5†	36	3.58	.....	1.55	5.5	13	13	8	9	ne.	George P. Kirsten.
Paterson.....	Passaic.....	80	47	51.4	+1.1	81	2	30	6†	35	3.74	+0.25	1.45	1.5	14	3	6	21	nw.	Marion T. Probert.
Pompton Plains.....	Morris.....	195	16	.....	.....	.....	.....	.....	.....	.....	4.05	+0.49	1.03	2.0	10	.....	.....	.....	.....	M. S. Taylor.
Somerville.....	Somerset.....	60	36	49.4	+0.7	78	2	22	6	43	3.94	+0.39	1.29	1.5	14	10	9	11	sw.	A. A. Macdonald.
South Orange.....	Essex.....	200	48	50.0	+1.7	77	2	30	11	28	3.15	-0.34	1.33	4.5	9	14	6	10	w.	Dr. W. J. Chandler.
New York, N. Y.....		365	48	49.8	+1.7	76	2	30	11	26	3.78	+0.48	1.29	2.6	12	5	10	15	ne.	U. S. Weather Bureau.
Means and extremes.....				49.8	+0.8	81	2	22	6	45	3.70	+0.11	1.71	3.4	12	11	8	11	ne.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	37	52.8	+1.0	80	2†	29	6	41	3.53	+0.10	1.50	T.	10	12	7	11	ne.	Henry A. Jorden.
Burlington.....	Burlington.....	12	§32	52.4	+1.3	78	2	29	5	38	3.87	+0.50	1.51	1.1	9	17	5	8	nw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	26	52.0	+1.7	80	30	28	6	39	8.55	+0.41	1.14	T.	12	11	7	12	ne.	W. Rex B. Sutch.
Hammonton.....	Atlantic.....	103	16	.....	.....	.....	.....	.....	.....	.....	4.16	+0.32	1.37	1.0	8	15	6	9	ne.	G. H. Parkhurst.
Hightstown.....	Mercer.....	120	26	51.0	+1.2	76	2†	28	6	36	3.62	-0.29	1.05	.....	12	9	12	9	.....	G. Franklin Eldridge.
Imlaystown††.....	Monmouth.....	185	30	.....	.....	.....	.....	25	5	34†	3.28	-0.22	1.35	.....	8	.....	.....	.....	nw.	F. B. Jones.
Indian Mills.....	Burlington.....	76	29	51.6	+0.3	80	30	26	6	42	3.55	+0.42	0.83	T.	11	10	4	11	ne.	James M. Armstrong.
Lakewood.....	Ocean.....	54	15	50.1	+0.4	77	2	22	6	41	4.77	+1.04	1.60	1.0	11	9	7	14	ne.	R. W. Holman.
Moorestown.....	Burlington.....	75	56	52.1	-2.1	80	3	26	6	37	3.88	+0.69	1.24	1.0	9	10	12	8	ne.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	11	.....	.....	.....	.....	.....	.....	.....	4.04	+0.67	1.49	0	10	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	20	.....	.....	.....	.....	.....	.....	.....	5.15	+1.66	1.55	.....	10	16	3	11	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	47	50.1	-0.3	76	2	31	11	32	3.25	-0.04	1.26	0.7	10	8	8	14	ne.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	25	49.6	+1.7	80	2	26	5	38	4.91	+1.12	1.85	T.	8	9	11	10	ne.	Frank R. Austin.
Vineland.....	Cumberland.....	109	50	53.2 ^b	+2.5	81	30	28	5	38	3.83	+0.49	1.09	T.	10	18	2	10	ne.	H. C. Himes.
Woodbine.....	Cape May.....	43	27	.....	.....	78	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Baron de Hirsch Agr. Sch.
Philadelphia, Pa.....		117	48	52.2	+1.4	76	2	32	11	28	4.42	+1.51	1.32	T.	11	7	6	17	nw.	U. S. Weather Bureau.
Means and extremes.....				51.5	+1.4	81	30	22	6	42	3.96	+0.49	1.85	0.4	10	12	7	11	ne.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	29	47.7 ^a	-0.4	74	2	30	5	36	4.70	+1.03	1.87	2.2	11	13	4	13	ne.	Wilbur H. Pancoast.
Atlantic City.....	Atlantic.....	16	45	47.5	-0.1	77	2	32	5	33	4.53	+1.54	1.43	T	13	5	11	14	ne.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	34	49.1	+0.7	78	2	34	13	33	2.94	-0.05	1.42	0	11	7	11	12	s.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	11	46.6	-2.1	78	2	30	6	38	4.03	-0.40	1.77	1.0	11	5	13	12	ne.	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	20	47.8	+1.1	73	2	33	11	31	3.46	-0.83	1.38	0.9	12	5	12	13	ne.	U. S. Weather Bureau.
Means and extremes.....				47.7	-0.2	78	2	30	5†	38	3.93	+0.26	1.87	0.8	12	7	10	13	ne.	
For the State.....				49.8	+0.8	81	2†	18	5†	46	4.05	+0.52	1.87	2.6	12	11	8	11	ne.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means. * Received too late to be included in the means.

Reference letters, ^a, ^b, ^c, etc., appearing in the table indicate number of days missing; for example, ^b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Imlaystown is Cream Ridge.

Daily precipitation for April, 1918.

Stations.	Watershed.	Day of month.																															Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
<i>The Highlands and Kittatinny Valley.</i>																																	
Belvidere.....	Delaware.....			.58						.72	.62	*	1.05	.05					*		1.72	.10		.16						*	.43	5.43	
Charlottesville.....	Passaic.....			*	.64				T.	*	*	*	*	2.05					.26		*	*	1.45								.10	.16	4.80
Culvers Lake.....	Delaware.....			.40	T.				.01	.72	.45	.33	.60	.03					.10	.49		.05	1.05	.15	.20	.14				.01	.30	4.93	
Dover.....	Passaic.....			.75					*	.98	*	*	*	1.15					*	.19		*	*	1.23	.09						.10	.15	4.60
Layton.....	Delaware.....			.59					.03	.90	.57	.16	.61	.10					.26	.54		.06	1.14	.14	.14	.04				.06	.23	5.57	
Newton.....	Delaware.....			.58	.04				T.	1.14	.72	.24	.46	.04				T.	.35		.17	1.23	.10		.34					T.	.38	5.79	
Phillipsburg.....	do.....			.38					.03	.87	.49	.64	.35	T.				T.	.05		.04	1.33	.05	.17						.01	.19	4.60	
Sussex.....	Hudson.....																																
<i>The Red Sandstone Plain.</i>																																	
Bergen Point.....	Coast.....			*	.44				T.	*	.30	.64	.45	T.							T.	*	1.58							.08	*	3.49	
Boonton III.....	Passaic.....			.63	T.				.17	.48	.06	.45	.26	.01					.15	T.		.48	.95		.07					.04	.20	3.95	
Chatham I.....	do.....			.61					.16	.57	.15	.44	.36	.05					.01	.15		T.	.32	.96		.02				.04	.09	3.93	
Elizabeth.....	Coast.....			*	.48				T.	.26	.34	.28	.92	.10					.05		.02	1.31	.03		T.					.08	.24	4.13	
Flemington.....	Raritan.....			.38	.13				T.	.03	.23	.40	.48	.08					T.		T.	1.06	.03		.01					T.		3.43	
Highwood.....	Hackensack.....		T.	.50					T.	.05	.29	.26	.37	.09					T.	.11		T.	1.60	.01	T.	.01				.07	.08	3.44	
Jersey City**.....	Coast.....			.47					T.	.22	.37	.66	.61	.04				T.	.08	T.		.01	1.71							.05	.36	4.58	
Lambertville.....	Delaware.....			*	.44				T.	.55	.43	.76	.50	T.				T.	T.	.02		.08	1.14			T.				.03	.05	4.00	
Little Falls**.....	Passaic.....			.62					T.	.45	.25	.33	.57	T.					.08	.01				.02						T.	.09	3.76	
Newark**.....	Coast.....			.39						.31	.28	.15	.25	.08					.03	.03		.48	.48		.02	.01				.02	.35	2.88	
New Brunswick.....	Raritan.....			.22	.11				.01	.33	.31	.22	.57	.05	T.				T.	T.	T.	1.13	.01		T.					.03	.12	3.11	
Palisades Park.....	Hackensack.....			.47					T.	.06	.28	.15	.65	.05					.10	.01		.02	1.55		.02					.03	.19	3.58	
Paterson.....	Passaic.....			.36	.12				T.	.41	.36	.20	.51	.02					.10	.10		.02	1.45	.02		.03				.04	.10	3.74	
Plainfield**.....	Raritan.....																																
Pompton Plains I.....	Passaic.....				.61					.19	.53	.16	.49	.22	T.				T.			.58	1.03		T.					.03	.21	4.05	
Somerville.....	Raritan.....			.39	.05				.02	.38	.26	.66	.62	.08					.01			.03	1.29	.02		T.				.03	.10	3.94	
South Orange.....	Rahway.....			.30					T.	.24	.31	*	*	.75				T.	T.			1.33		T.	T.					.05	.17	3.15	
New York, N. Y***.....	Coast.....			.38					T.	.21	.23	.47	.38	.03				T.	.06	T.		.01	1.29		.01					.09	.62	3.78	
<i>The Southern Interior.</i>																																	
Bridgeton.....	Coast.....			.10						.30	1.50	.46	.05	.05						.10		.05	.80								.12	3.53	
Burlington.....	Delaware.....			*	.15					.58	.33	.50	.60	.06				T.				1.51									.14	3.87	
Clayton.....	Maurice.....		.12	.09	.01	.44			T.	.48	1.14	.44	.13	.01				T.	.08		.02	.97	T.			.06				T.		3.55	
Hammonton.....	Mullica.....			T.	.18					.21	1.37	.98	.03	.04					.23		T.	1.12										4.16	
Hightstown.....	Raritan.....			.03	.14					.26	.42	*	*	1.52						.02		.01	1.05							.03	.14	3.62	
Imlaystown.....	Delaware.....				.20					.12	.42	.40	.70	.04						.05			1.35									3.28	
Indian Mills.....	Mullica.....		.10	.14						.30	.81	.60	.24	.08					.09		T.	.83			.06					.30	3.55		
Lakewood.....	Metedeconk.....			.08	.13				T.	.10	.62	.91	.98	.14					.10	.05		T.	1.60				.06			T.	.06	4.77	
Moorestown.....	Delaware.....			T.	.08					.72	.66	.48	.62	.03					.02			1.24			.03					T.		3.88	
Northfield.....	Coast.....			.20						.10	.96	.80	.19	.07					.15		.02	1.49			.06						4.04		
Pleasantville.....	Coast.....			.01						.24	1.55	1.29	.18	.08					.19		.02	1.55				.04						5.15	
Trenton***.....	Delaware.....			.13					T.	.33	.08	.23	.33	T.				T.	T.	T.		.03	1.23		T.	T.	.01			.06	.82	3.25	
Tuckerton.....	Coast.....			.30						.04	1.20	1.13	.22	.11					.06		T.	1.85										4.91	
Vineland.....	Maurice.....			.10					T.	*	*	*	2.40	.03					.10		T.	1.09	T.			.10				.01		3.83	
Woodbine.....	Coast.....			.02	.10				.03	.40	.60	.80	.30	.20																		\$	
Philadelphia, Pa.....	Delaware.....			.01	.15				T.	.98	.36	.63	.25	T.				T.		T.		.10	1.22		T.	T.	.04			.02	.66	4.42	
<i>The Sea Coast.</i>																																	
Asbury Park.....	Coast.....			.45					T.	.18	.42	.89	.55	.12					.01	.02		.02	1.87							T.	.17	4.70	
Atlantic City***.....	do.....			.31						.36	1.08	.86	.10	.05				T.	.01	.08		.43	1.00	T.		T.	.06			.01	.18	4.53	
Cape May City.....	do.....		T.	.02					T.	.11	1.42	.16	.08	.02					.46		.07	.50				.09				T.	.01	2.94	
Long Branch**.....	do.....			.20						.11	.30	.40	.31	.06					T.	.03		.06	.79							.01	1.76	4.08	
Sandy Hook***.....	do.....			.25						.08	.23	.51	.15	.02				.01	T.	.01		.02	1.36							.12	.70	3.68	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded.

|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.

* Precipitation included in the next following measurement. **Precipitation for 24-hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.			Moisture.		Sun- shine	
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	Percentage of possible sunshine.
							Miles per hour.	Direction.	Date.			
Atlantic City.....	30.04	30.56	7	29.61	22	10	35	ne.	11	79	53	49
Cape May City.....	30.04	30.54	7	29.68	21	12	54	ne.	10	79	55	50
Long Branch.....	.....	30.57	7	29.52	21	14	76	ne.	11	69	65	55
Newark.....	.....	.....	.....	29.57	21	.....	.....	.....	.....	72*	63†	53
New York, N. Y.....	30.03	30.56	7	29.55	21	16	52	nw.	22	65	61‡	53
Palisades Park.....	30.03	30.54	7	29.55	21	.....	.....	.....	.....	.....	.....	51
Philadelphia, Pa.....	29.99	30.52	7	29.55	17	12	46	ne.	10	74	55	51
Sandy Hook.....	30.03	30.58	7	29.55	17	16	56	ne.	11	74	55	50
Trenton.....	30.02	30.52	7	29.57	17	14	46	ne.	10	74	55	50

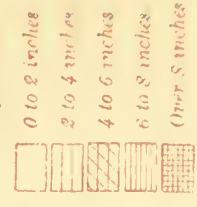
§ Two directions and dates

* 7 a. m. † 9 p. m.

Daily temperatures for April, 1918.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.	
<i>The Highlands and Kittatinny Valley</i>																																	
Belvidere.....	Maximum ...	77	81	72	55	52	63	64	60	58	37	39	37	46	67	76	75	75	73	68	59	50	57	72	65	62	67	68	72	72	72	...	63.0
	Minimum	36	44	40	35	28	25	38	41	36	30	30	31	29	28	30	33	45	62	41	39	37	42	46	42	34	35	38	37	51	57	...	38.0
Charlotteburg.....	Maximum ...	74	75	75	46	46	59	57	59	57	37	38	33	40	56	69	68	70	...	52	49	46	55	67	67	55	60	62	64	65	69	...	57.6 ^a
	Minimum	46	51	36	32	27	28	26	36	36	27	28	30	29	29	38	40	48	48	37	35	35	43	49	41	33	31	30	31	49	50	...	36.4
Dover.....	Maximum ...	73	78	58	51	50	63	55	58	50	39	36	33	42	63	73	74	74	70	58	43	50	55	70	59	59	60	65	66	64	76	...	58.8
	Minimum	44	47	38	34	28	29	31	...	34	30	28	30	30	31	36	39	53	41	38	36	36	45	43	34	35	36	36	49	49	50	...	37.2 ^a
Layton.....	Maximum ...	71	78	54	51	51	64	61	59	51	36	37	34	44	63	65	76	76	72	58	42	48	56	68	56	60	66	67	72	69	75	...	59.3
	Minimum	35	42	37	34	27	23	30	39	35	29	29	30	29	28	27	30	50	48	39	35	35	44	38	40	32	29	33	31	51	53	...	35.4
Newton.....	Maximum ...	77	75	68	50	49	59	59	59	54	33	35	33	44	60	69	73	72	69	65	50	46	55	69	56	53	62	63	68	66	75	...	59.1
	Minimum	42	47	38	31	25	27	34	39	33	26	27	28	28	31	36	41	51	55	38	33	33	39	44	37	32	36	38	37	49	50	...	36.8
Phillipsburg.....	Maximum ...	74	78	55	51	52	62	62	60	52	39	37	36	44	64	73	76	74	73	61	45	52	57	73	61	62	64	67	71	72	75	...	60.7
	Minimum	42	47	40	36	29	29	35	41	32	31	30	32	30	31	35	37	52	48	40	39	38	45	42	43	35	37	40	39	52	53	...	38.7
Sussex.....	Maximum ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Minimum	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<i>The Red Sandstone Plain.</i>																																	
Bergen Point.....	Maximum ...	67	70	71	51	52	59	62	58	52	43	40	37	42	64	74	78	78	68	59	51	...	59	74	64	61	58	62	68	60	69	...	60.4 ^a
	Minimum	45	51	42	36	28	29	32	38	35	32	30	31	31	35	37	42	...	40	40	39	39	47	44	46	37	37	41	43	47	47	...	38.7 ^a
Boonton§§.....	Maximum ...	72	72	57	50	50	62	57	61	47	41	38	34	43	62	71	74	74	66	57	45	52	55	68	58	54	65	67	69	67	74	...	58.9
	Minimum	40	41	40	35	31	25	29	35	41	31	29	31	31	28	35	36	48	55	39	38	36	39	41	45	35	35	34	39	49	50	...	37.4
Elizabeth.....	Maximum ...	79	81	75	54	56	65	58	62	54	43	40	36	45	67	77	77	77	72	58	56	51	59	74	71	63	61	65	70	68	73	...	62.9
	Minimum	43	47	43	38	27	27	31	40	43	34	31	32	32	40	40	40	54	50	39	40	39	47	45	47	34	35	39	39	51	49	...	40.0
Flemington.....	Maximum ...	72	81	77	54	54	62	63	60	54	42	39	35	46	68	76	76	74	73	67	54	51	59	71	68	65	63	69	71	78	...	62.9	
	Minimum	32	45	43	38	30	28	31	40	41	35	31	32	32	33	38	31	49	52	41	40	38	45	38	44	35	37	39	41	51	51	...	38.7
Highwood.....	Maximum ...	73	77	65	50	51	61	56	60	53	43	40	35	42	63	74	75	75	67	53	48	50	58	72	60	64	62	65	60	72	...	59.4	
	Minimum	45	50	40	35	25	25	30	38	34	32	32	31	32	32	33	33	53	41	39	37	38	45	43	47	34	35	36	39	49	49	...	37.9
Jersey City.....	Maximum ...	72	80	70	52	54	60	52	62	52	42	37	35	43	66	76	76	75	66	58	50	53	58	74	71	61	61	64	71	64	68	...	60.3
	Minimum	47	47	42	37	32	35	38	41	35	33	32	33	32	38	42	49	54	41	41	40	46	48	44	38	45	46	47	52	49	...	41.5	
Lambertville.....	Maximum ...	72	80	64	51	49	59	60	61	54	42	39	36	41	61	68	70	71	73	65	55	52	57	72	70	60	62	69	68	69	76	...	60.9
	Minimum	43	45	41	37	27	26	31	39	40	33	31	31	29	30	34	35	44	57	40	40	38	40	44	44	34	38	39	39	51	51	...	38.4
Little Falls.....	Maximum ...	74	78	60	52	50	61	56	63	50	44	41	37	46	63	71	71	75	66	57	49	51	58	72	58	60	62	65	68	67	77	...	60.1
	Minimum	46	46	41	36	29	28	34	41	35	32	30	32	33	33	35	34	55	44	41	43	38	44	47	...	35	38	38	39	...	...	38.0 ^c	
Newark.....	Maximum ...	72	79	64	51	51	60	55	61	51	46	37	33	41	64	74	76	75	66	55	45	50	56	72	61	62	64	67	65	70	...	59.4	
	Minimum	49	50	41	37	32	37	39	40	32	32	31	31	32	38	47	52	58	39	38	38	38	49	47	45	37	42	42	43	46	52	...	41.1
New Brunswick.....	Maximum ...	72	78	76	50	51	59	59	57	56	43	38	34	43	62	72	74	74	72	56	50	51	56	71	69	59	60	57	65	60	75	...	60.0
	Minimum	45	47	42	38	30	32	40	42	33	31	31	32	34	40	45	54	49	39	40	38	47	45	46	36	39	40	41	49	49	...	40.1	
Palisades Park.....	Maximum ...	73	79	58	51	52	61	56	59	50	41	37	35	41	64	74	74	74	64	55	44	50	57	71	58	60	63	67	66	59	70	...	58.6
	Minimum	48	51	38	35	28	28	34	38	31	30	30	31	31	32	38	50	54	39	39	39	38	45	47	41	33	37	36	41	49	49	...	38.4
Paterson.....	Maximum ...	78	81	75	54	55	65	57	62	53	43	40	35	45	67	77	78	72	57	50	59	59	78	63	66	67	70	64	73	...	62.5		
	Minimum	42	47	42	37	31	30	34	40	38	33	30	32	32	36	43	48	56	43	41	39	38	46	46	47	37	39	40	42	50	50	...	40.3
Plainfield.....	Maximum ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Minimum	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Somerville.....	Maximum ...	73	78	72	53	50	61	60	55	44	38	35	46	64	73	75	75	75	61	51	54	58	72	67	61	60	63	68	66	75	...	61.4	
	Minimum	34	43	39	37	26	22	27	39	41	32	30	31	30	29	30	37	50	55	40	38	42	47	36	45	33	33	35	40	49	49	...	37.3
South Orange.....	Maximum ...	73	77	66	51	50	60	54	60	52	42	40	35	45	63	72	73	76	66	54	45	51	56	70	62	60	58	62	66	65	73	...	59.2
	Minimum	45	51	42	36	31	31	36	40	36	33	30	32	32	36	45	48	57	42	41	39	38	48	46	46	37	41	40	44	50	51	...	40.8
New York, N. Y.....	Maximum ...	70	76	65	50	50	59	50	60	55	41	37	36	42	62	71	72	71	66</														

Scale of Shades.



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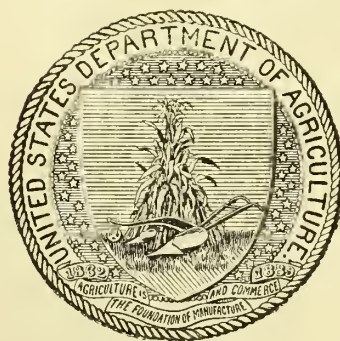
U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU
CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

MAY, 1918.

BY
G. HAROLD NOYES
METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
JUNE 19, 1918.

Departure of the Mean Temperature from the Normal, May, 1918.



Shaded portions show excess (+).
Unshaded portions show deficiency (-).
Lines show amount of excess or deficiency.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

Vol. XXIII.

TRENTON, N. J., MAY, 1918.

No. 5.

GENERAL SUMMARY.

May of 1918 was in marked contrast with the same month of last year in New Jersey, which was the coldest May ever known in this region. Since records of the whole State have been compiled in 1885, there has been but one May warmer than that of this year, and that was in 1896. In May 1911 the warmth averaged much the same as this year, but it was a very dry month, thus greatly accentuating the abnormally warm spring month; while this year May has furnished a moderate excess of rainfall in practically all regions of the State. The abnormal warmth was equally distributed both as to parts of the State and the month, there being but about six scattered days when temperatures were subnormal. In nearly all central districts, the rain exceeded normal, both as to amount and frequency of occurrence, but in portions of the Passaic watershed there was a slight deficiency of moisture.

From the point of view of farming, it has been a very remarkable spring; each week has been a little warmer than the preceding one, without a single setback on account of a cold spell of weather. As a result crops were definitely more than ordinarily advanced in development at the close of the month.

The mean stage of the Delaware River at Phillipsburg was 3.3 feet, the highest stage being 5.1 feet on the 28th. At Trenton the mean daily stage was 2.4 feet, which was 0.3 foot below normal; the highest stage was 3.1 feet on the 28th.

The temperature departures from normal for the year 1918, to date, by sections is: The Highlands, -0.3 ; Red Sandstone Plain, -0.3 ; Southern Interior, 0.0 ; The Seacoast, -1.1 . The precipitation accumulated departure for the year 1918 to date is: The Highlands, -0.24 ; Red Sandstone Plain, -3.35 ; Southern Interior, -0.37 ; The Seacoast, -2.99 .

Storm warnings were displayed along the coast on the 7th and 10th.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 37 stations, was 64.6° , which was 4.4° above normal. The highest temperature was 93° at Layton and Pater-son on the 28th, and the lowest, 31° at Charlotteburg on the 17th. The highest monthly mean temperature was 67.8° at Bridgeton and Vineland, and the lowest mean, 62.0° at Charlotteburg. The greatest daily range of temperature was 48° at Boonton and Charlotteburg on the 17th.

PRECIPITATION.

The average total rainfall of the State, as deduced from observations of 41 stations, was 4.94 inches, which was 1.11 inches greater than normal. The greatest monthly amount was 7.59 inches at Hightstown, and the least, 2.74 inches at Sandy Hook. The greatest amount of rain accumulated in any 24 consecutive hours was 3.44 inches at Hightstown on the 21st. The average number of days on which 0.01 inch or more rain fell was 12, which was 1 more than normal.

WIND.

The prevailing wind direction was from the southwest, with an approximate velocity of 10 miles per hour, which was prob-

ably somewhat lighter than usual. The highest velocity, sustained for five consecutive minutes, was 60 miles per hour from the west, at Trenton on the 10th. High winds were also noted, particularly along the coast on the 1st, 3d, 8th, 13th, 18th, 19th, 20th, 28th and 29th.

SUNSHINE AND CLOUDINESS.

The average number of clear days throughout the State was 14, which was 2 more than normal; partly cloudy, 10, or normal; cloudy, 7, or 2 less than normal. The approximate percentage of possible sunshine was 63, and was about normal.

MISCELLANEOUS.

Light frost occurred in scattered localities in northern and central portions on the 2d and 17th. Thunderstorms occurred in some portion of the State on the 3d, 4th, 5th, 6th, 10th, 11th, 12th, 13th, 14th, 21st, 22d, 26th, 27th, 28th and 29th. Hail occurred on the 10th, 11th, 12th, 18th and 27th. The aurora was observed on the night of the 16th-17th. Solar halos were observed on the 4th, 9th, 16th, 20th, 24th and 25th; lunar halo on the 15th. Fog was observed, especially along the eastern coast from the 4th to 7th, 10th, 12th, 13th, 15th, 17th to 22d, 26th, 27th, 29th, 31st.

COMPARATIVE DATA FOR MAY.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more prec.
1885.....	57.3	90	29	2.74	5.20	1.18	.....	.....	.....	.....
1886.....	58.8	87	36	6.07	8.46	4.15	.....	.....	.....	.....
1887.....	63.3	91	35	1.37	3.82	0.08	.....	.....	.....	.....
1888.....	58.6	90	26	4.92	6.48	3.00	.....	.....	.....	9
1889.....	62.3	94	32	4.09	6.60	2.43	.....	.....	.....	18
1890.....	60.7	87	33	4.24	7.17	2.60	.....	.....	.....	16
1891.....	59.5	93	28	2.97	5.39	1.78	.....	.....	.....	12
1892.....	60.1	90	30	5.04	6.52	3.26	.....	.....	.....	11
1893.....	59.4	95	29	4.07	6.38	2.55	.....	.....	.....	11
1894.....	61.4	93	30	7.72	15.61	3.57	.....	.....	.....	10
1895.....	60.9	102	28	2.85	3.95	1.66	.....	.....	.....	13
1896.....	65.3	98	29	3.21	4.54	1.62	.....	.....	.....	8
1897.....	60.6	87	29	5.68	9.11	1.71	.....	.....	.....	9
1898.....	58.5	93	29	7.00	9.26	3.92	.....	.....	.....	10
1899.....	61.1	94	29	1.92	3.15	1.15	.....	.....	.....	12
1900.....	58.6	90	26	4.71	7.33	2.53	.....	.....	.....	8
1901.....	60.3	95	29	5.60	8.13	3.10	.....	.....	.....	15
1902.....	60.3	95	29	2.04	4.63	1.11	.....	.....	.....	7
1903.....	62.7	98	27	0.69	1.32	0.08	.....	.....	.....	10
1904.....	62.8	97	31	2.60	6.69	1.01	.....	.....	.....	5
1905.....	61.4	89	22	1.71	3.94	0.42	.....	.....	.....	8
1906.....	61.0	94	24	4.21	6.28	2.37	.....	.....	.....	11
1907.....	55.4	91	22	5.05	8.09	2.51	.....	.....	.....	8
1908.....	61.6	95	29	7.10	9.99	4.39	.....	.....	.....	10
1909.....	60.0	91	27	2.30	4.84	0.79	.....	.....	.....	12
1910.....	60.0	94	27	2.54	4.25	1.48	.....	.....	.....	10
1911.....	64.5	99	22	1.37	3.84	0.31	.....	.....	.....	11
1912.....	62.0	92	31	4.09	6.47	2.79	.....	.....	.....	6
1913.....	60.3	94	25	3.45	4.86	2.53	.....	.....	.....	7
1914.....	63.1	98	30	2.93	5.09	0.95	.....	.....	.....	9
1915.....	58.1	88	30	3.82	6.15	2.00	.....	.....	.....	7
1916.....	61.1	90	32	3.48	5.27	2.14	.....	.....	.....	9
1917.....	64.0	90	22	3.83	6.83	2.08	.....	.....	.....	11
1918.....	64.6	93	31	4.94	7.59	2.74	.....	.....	.....	12

ERRATA.

FEBRUARY, 1918.—Bridgeton; number of days with .01 or more precipitation 5, should read 6; Moorestown; highest temperature 60 on the 28th, should read 63 on the 25th; Tuckerton; mean minimum temperature 21.2° , should read 20.4° , mean monthly temperature 31.3° , should read 30.9° , and the departure from normal -0.8 , should read -1.2 .

MARCH, 1918.—Comparative data for March, page 19, 1897, lowest temperature 18, should read 8; Trenton; number of clear days 13, should read 14; number of cloudy days 9, should read 8; Atlantic City; date of highest temperature 69, should read 19; Sandy Hook; departure from normal temperature -3.5 , should read $+3.5$.

Make these corrections in the Comparative Data table on the 3d page of the following Monthlies.—February 1918 issue; 1917, least precipitation 1.18, should read 0.92; March 1916 and 1917 issues, 1897, lowest temperature 18, should read 8; April 1915, 1916 and 1917 issues; 1914, mean precipitation 3.68, should read 3.67; May 1916 and 1917 issues; 1916, partly cloudy days 12, should read 11; cloudy 11, should read 8; with .01 or more precipitation 8, should read 12; December 1914, 1915, 1916 and 1917 issues; 1907, lowest temperature -3 , should read 3.

Climatological data for May, 1918.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation 0.1 in. or more.	Clear.	Pt. cloudy.			Cloudy.
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	27	65.4	+4.7	89	6	36	2	38	6.39	+2.50	1.68	0	14	22	5	4		Samuel J. Hixson. George S. Briggs. Brice E. Riker. William C. Harris.
Charlotteburg.....	Passaic.....	719	26	62.0 ^a	+4.7	87	6	31	17	48	5.52	+0.72	1.32	0	11	20	10	1	sw.	
Culvers Lake.....	Sussex.....	848	17	63.7	.....	.....	.....	32	2	.....	3.68	+0.18	1.19	0	16	22	5	4	e.	
Dover.....	Morris.....	600	34	63.3	+4.7	90	28	37	17	44	4.94	+0.80	1.43	0	13	6	14	11	.....	
Layton.....	Sussex.....	480	18	64.8	+6.9	93	28	33	2	45	4.56	+1.23	1.87	0	13	13	6	12	s.	A. M. Depue. Irving G. Kern. D. Wilson Smith.
Newton.....	Sussex.....	769	37	63.7 ^a	+4.4	87	6 [†]	34	2	35	4.30	+0.16	1.18	0	13	14	7	10	sw.	
Phillipsburg.....	Warren.....	363	36	65.6	+4.3	89	6 [†]	39	2	36	4.83	+0.78	2.49	0	14	16	9	6	s.	
Means and extremes.....				64.1	+5.0	93	28	31	17	48	4.89	+0.91	2.49	0	13	16	8	7	sw.	
<i>The Red Sandstone Plain.</i>																				
Bergen Point.....	Hudson.....	37	21	64.2 ^c	+4.5			39	2	34	4.73	+0.75	1.12	0	9				se.	William H. Mitchell. J. W. Demmers. Paul Molitor. L. B. Bonnett.
Boonton.....	Morris.....	400	28	62.8	.....	89	28	35	17	48	3.61	-0.64	1.00	0	10	20	4	7	sw.	
Chatham.....	Morris.....	330	16	65.7	.....	.....	.....	37	2	45	5.24	+1.32	1.27	0	14	15	12	4	.....	
Elizabeth.....	Union.....	45	39	65.7	+3.5	91	6 [†]	37	2	45	4.67	+0.75	1.35	0	14	9	16	6	w.	
Flemington.....	Hunterdon.....	140	30	66.0	+6.1	90	6 [†]	38	2	43	4.39	+0.10	0.95	0	13	16	11	4	sw.	Hiram E. Deats. Charles J. Bates. S. K. Pearson, Jr. Thomas R. Hunt.
Highwood.....	Bergen.....	90	29	63.2	+3.5	89	6 [†]	35	2	38	4.30	+0.46	1.06	0	15	10	10	11	se.	
Jersey City.....	Hudson.....	10	19	66.0	+4.9	91	6 [†]	42	2	36	4.66	+1.48	2.12	0	11	11	13	7	w.	
Lambertville.....	Hunterdon.....	80	31	63.6 ^a	+1.9	87	27	37	2	34	4.40	+0.33	2.00	0	16	10	10	11	w.	
Little Falls.....	Passaic.....	180	15	65.0		91	28	39	17	41	3.73	-1.03	0.95	0	9				se.	Montclair Water Co. Prof. William Wiener. N. J. Experiment Station. George P. Kirsten.
Newark.....	Essex.....	159	76	66.0	+5.2	90	6	42	2	28	4.69	+0.65	2.05	0	13	16	9	6	sw.	
New Brunswick.....	Middlesex.....	110	65	65.8	+5.2	88	6 [†]	38	2	39	5.11	+1.20	2.27	0	15	16	12	3	sw.	
Palisades Park.....	Bergen.....	80	3	63.2	.....	90	28	36	2	38	3.78	.....	0.97	0	12	14	11	6	se.	
Paterson.....	Passaic.....	80	47	66.6	+5.3	93	28	40	2	41	3.81	-0.68	1.03	0	11	1	4	26	sw.	Marion T. Probert. M. S. Taylor A. A. Macdonald. Dr. W. J. Chandler.
Pompton Plains.....	Morris.....	195	16	64.3	+4.2	89	6	35	17	46	4.18	-0.18	1.12	0	11	.....	.....	.....	sw.	
Somerville.....	Somerset.....	60	36	64.3	+4.2	89	6	35	17	46	6.07	+1.95	1.10	0	14	16	7	8	sw.	
South Orange.....	Essex.....	200	48	64.7	+4.7	88	28	40	2	37	4.75	+1.29	1.36	0	11	17	9	5	w.	
New York, N. Y.....		365	48	63.9	+4.6	86	28	42	2	25	3.37	+0.19	1.30	0	12	6	14	11	sw.	U. S. Weather Bureau.
Means and extremes.....				64.8	+4.5	93	28	35	2 [†]	48	4.50	+0.51	2.27	0	12	13	10	8	sw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	37	67.8	+3.9	90	6	37	2	37	4.37	+0.44	1.45	0	9	22	4	5	sw.	Henry A. Jorden. D. S. B. McCoy. W. Rex B. Sutch. G. H. Parkhurst.
Burlington.....	Burlington.....	12	32	66.8	+1.7	90	6	41	2	40	7.03	+2.80	1.79	0	14	22	6	3	sw.	
Clayton.....	Gloucester.....	126	26	66.8	+4.9	90	27	37	2	39	6.14	+2.88	2.56	0	10	17	11	3	sw.	
Hammonont.....	Atlantic.....	103	16	65.6 ^c	.....	.....	.....	37	2	.....	6.09	+2.07	2.03	0	10	23	6	2	se.	
Hightstown.....	Mercer.....	120	26	65.6 ^c	+4.5	89	6	38	2	42	7.59	+3.77	3.44	0	13					G. Franklin Eldridge. F. B. Jones. James M. Armstrong. R. W. Holman.
Imlaystown.....	Monmouth.....	185	30	65.0 ^m	+2.8	85 ^m	28	34	2	41	.....	.....	2.70	0	.....	.....	.....	.....	.....	
Indian Mills.....	Burlington.....	76	29	66.0	+4.0	92	27	36	2	45	5.54	+1.50	1.32	0	10	10	12	9	sw.	
Lakewood.....	Ocean.....	54	15	65.2	+4.7	91	27	35	17	41	6.86	+3.00	3.30	0	11	11	13	7	sw.	
Moorestown.....	Burlington.....	75	56	66.4	+5.3	89	6	39	2	38	7.49	+3.46	2.12	0	13	14	17	0	sw.	Geo. L. Gillingham. William L. Flick. Lincoln Van Gilder. U. S. Weather Bureau.
Northfield.....	Atlantic.....	25	11	66.4	.....	.....	.....	.....	.....	.....	4.82	+1.50	2.12	0	7	.....	.....	.....	.....	
Pleasantville.....	Atlantic.....	26	20	65.1	+4.0	88	27	41	2	32	5.28	+1.92	2.45	0	6	18	8	5	.....	
Trenton.....	Mercer.....	190	47	65.1	+4.0	88	27	41	2	32	4.47	+0.85	2.14	0	14	7	10	14	s.	
Tuckerton.....	Ocean.....	23	25	64.4	+4.7	90	6 [†]	36	2	37	5.80	+2.37	1.95	0	8	12	14	5	sw.	Frank R. Austin. H. C. Himes Baron de Hirsch Agr. Sch. U. S. Weather Bureau.
Vineland.....	Cumberland.....	109	50	67.8 ^a	+5.6	90	6	38	2	37	5.85	+2.08	1.53	0	8	.....	.....	.....	sw.	
Woodbine.....	Cape May.....	43	27	65.8 ^c	+5.4	89	28	.....	.....	.....	3.92	+0.02	1.80	0	5	25	3	3	sw.	
Philadelphia, Pa.....		117	48	67.9	+5.0	89	6	45	2	32	6.81	+3.61	3.16	0	13	8	9	14	s.	
Means and extremes.....				66.1	+4.5	92	27	34	2	45	5.80	+2.04	3.44	0	10	16	10	5	sw.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	29	62.9 ^k	+4.2	92	6	45	2	38	5.68	+1.97	3.06	0	9	12	9	10	se.	Wilbur H. Pancoast. U. S. Weather Bureau. U. S. Weather Bureau. William D. Martin, Jr. U. S. Weather Bureau.
Atlantic City.....	Atlantic.....	16	45	60.8	+3.3	83	8	40	2	27	3.81	+0.81	1.66	0	11	8	15	8	sw.	
Cape May City.....	Cape May.....	17	34	61.9	+3.3	82	6	46	2	28	3.16	+0.17	1.19	0	8	11	15	5	s.	
Long Branch.....	Monmouth.....	25	11	59.0	+0.4	90	6	39	2 [†]	37	4.15	+0.58	1.09	0	13	11	16	4	s.	
Sandy Hook.....	Monmouth.....	22	20	62.4	+3.6	85	28	45	2	30	2.74	-1.24	0.89	0	14	10	12	9	s.	
Means and extremes.....				61.4	+3.0	92	6	39	2 [†]	33	3.91	+0.46	3.06	0	11	11	13	7	s.	
For the State.....				64.6	+4.4	93	28	31	17	48	4.94	+1.11	3.44	0	12	14	10	7	sw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

†† Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Imlaystown is Cream Ridge.

Daily precipitation for May, 1918.

Stations.	Watershed.	Day of month.																															Total.	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>The Highlands and Kittatinny Valley.</i>																																		
Belvidere.....	Delaware.....	.29			.50						.50		.02	.69	.47								.63	.68	.29		.20		*	1.68		.23	.21	6.39
Charlotteburg.....	Passaic.....	.61		*	.30						.59			*	.93							1.32	.56	T.			T.	.08			1.00	.13	5.52	
Culvers Lake.....	Delaware.....	.32		.03	.02				.02		.15	T.	.06	.42	.31							.80	.01	.10		.02		.12	.01		1.19	.10	3.68	
Dover.....	Passaic.....	.65		.21							.28		.10	*	1.20							1.43		.12		.03		.15	.05		.65	.07	4.94	
Layton.....	Delaware.....	.33		.04	.13				.01		.03			1.56	.31							.49		.23			T.	.09	.08	T.	1.03	.23	4.56	
Newton.....	Delaware.....	*.....	.50	.05					T.			.49	.05		.88							.68	.01	.28		.01	T.	.03	T.		1.18	.14	4.30	
Phillipsburg.....	do.....	.17		.05	.02	T.					.45		.03	.50	.06							.34		.30		.11		2.28	.21	T.	.11	.20	4.83	
Sussex.....	Hudson.....																																	
<i>The Red Sandstone Plain.</i>																																		
Bergen Point.....	Coast.....	.96		T.	1.12						T.	.58			.34							.82	.04	.22				T.		.60	T.		.05	4.73
Boonton III.....	Passaic.....	.67	T.		.15				T.		.25		.02	.98								.19	.55	.13		T.				.62	.05	3.61		
Chatham II.....	do.....	.94			.26				T.		.48	.01	.02	.46								.10	.79	.25	.04				.10	1.27	.45	.07	5.24	
Elizabeth.....	Coast.....	.85		*	.25	.01					.67			.42								1.35	.07	.13		.02		.16	.29	T.	.42	.03	4.67	
Flemington.....	Raritan.....	.58			.03		T.		T.		T.	.47	.03		.53							.47	.45	.04		.10			.95	.15	.23	.36	4.39	
Highwood.....	Hackensack.....	.88		.33	.05		.12		T.		.29	.05	T.		.31							.79	.02	.15		T.	.02	.04	.01	T.	1.06	.18	4.30	
Jersey City**.....	Coast.....	.61		.20	.05				T.		.85		T.		.30							2.12		.03				.09	.04		.33	.04	4.66	
Lambertville.....	Delaware.....	T.		*	.07	.22					*	.24	.05	*	.08							1.34	.66	.06		.20		1.00	.06		.22	.20	4.40	
Little Falls**.....	Passaic.....	.95		.24			T.				.22		T.	.21	.30							.77		.37		T.		T.			.62	.05	3.73	
Newark**.....	Coast.....	.32		.15		.12			.01		.58			.40	T.							.52	2.05	.07				.07	.05		.32	.03	4.69	
New Brunswick.....	Raritan.....	.85			.29		.01		.01		.08	.01		.46	.01							2.27	.44	.02	.04				.08		.38	.16	5.11	
Palisades Park.....	Hackensack.....	.83		*	.18		.02		T.		.39		T.	.29								.25	.60	.01		T.		.07		.97	.17	3.78		
Paterson.....	Passaic.....	.60			.27				T.		T.	.31	T.	T.	.33							.68	.12	.26			T.	.12	.03	T.	1.03	.06	3.81	
Plainfield**.....	Raritan.....																																	
Pompton Plains I.....	Passaic.....	.84			.21						.33			1.12								.13	.31	.09	T.			.08		.07		.91	.09	4.18
Somerville.....	Raritan.....	.83			*		.33				.53	T.	T.	.58								1.10	.44	.40		.16		.39	.34	.42	.23	.32	6.07	
South Orange.....	Rahway.....	.81		.24			.02				.82			.40								1.36		.16				.06	.38		.44	.06	4.75	
New York, N. Y***.....	Coast.....	.36		.19	.06				T.		.58		T.	.09	.23							1.30	T.	.05		T.		.05	.05		.37	.04	3.37	
<i>The Southern Interior.</i>																																		
Bridgeton.....	Coast.....	1.30		.03	.03						.48			1.45									.35	.28		T.			.40	T.		.05	4.37	
Burlington.....	Delaware.....	.86		.18	.15	.10					*	.88			1.36							.84	.95			.06			1.25	.10	.20	.10	7.03	
Clayton.....	Maurice.....	.99	T.		.17	.01					.28			1.04								T.	.88	.11				2.56	T.	.01	.09	6.14		
Hammonton.....	Mullica.....	1.13			.02	T.					.19			1.26									.96	.19		.04			2.03	.05	T.	.22	6.09	
Hightstown.....	Raritan.....	1.01			.14	.01	.01				.32			.96								3.44	.83			.13		.33	.27		*	.14	7.59	
Imlaystown.....	Delaware.....	.90		.06	*	*					.60			.55	*							2.70	.90	.05					.88		\$	\$	\$	
Indian Mills.....	Mullica.....	1.04			.02	.09					.10			1.16								T.	1.03	.32				1.32		.06	.40	5.54		
Lakewood.....	Metedeconk.....	1.12			.15		.08				.30			.65								1.70	1.60	.04		T.			.90	T.	.15	.17	6.86	
Moorestown.....	Delaware.....	.96	.04		.05	.08					.35			1.11								.18	1.63	.10		T.		2.12		.10	.25	7.49		
Northfield.....	Coast.....	1.27			T.						.50			.43									.16					2.12		.02	.32	4.82		
Pleasantville.....	Coast.....	1.25									T.			.85									.45						2.45		.13	.15	5.28	
Trenton***.....	Delaware.....	.13		.03	.01	.03					.37			.49	.22							T.	1.57	.57	T.		.05		.62	.10	T.	.07	.11	4.37
Tuckerton.....	Coast.....	1.02			.05	T.					.30	T.		.45								1.95				.16		1.38		T.	.49	5.80		
Vineland.....	Maurice.....	1.09	T.			.01					.45			1.53									.64	.12		T.		1.48		.53	T.	5.85		
Woodbine.....	Coast.....	1.00									.55			.42									.15					1.80				3.92		
Philadelphia, Pa.....	Delaware.....	.16			.03	.01					.29			.96	.19								.57	1.09	.04		.01		3.16	T.		.08	.22	6.81
<i>The Sea Coast.</i>																																		
Asbury Park.....	Coast.....	.78									.26			.51	.27								1.85	1.21					.12	.23		.45	5.68	
Atlantic City***.....	do.....	.63							T.		.40		T.	.09	.39								.01	.10	T.				.87	.79	.08	.01	.44	3.81
Cape May City.....	do.....	.67			.01						.06	.46			.70												.01		1.19		T.	.06	3.16	
Long Branch**.....	do.....	T.		.10					.01		.76			.20	.10								.50	.59	.10		T.		.14	.76	.07	.78	.04	4.15
Sandy Hook***.....	do.....	.33		.19	.02	T.	.03				.32			.06	.33							T.	.67	.18	T.		.07		.13	.12	T.	.28	.01	2.74

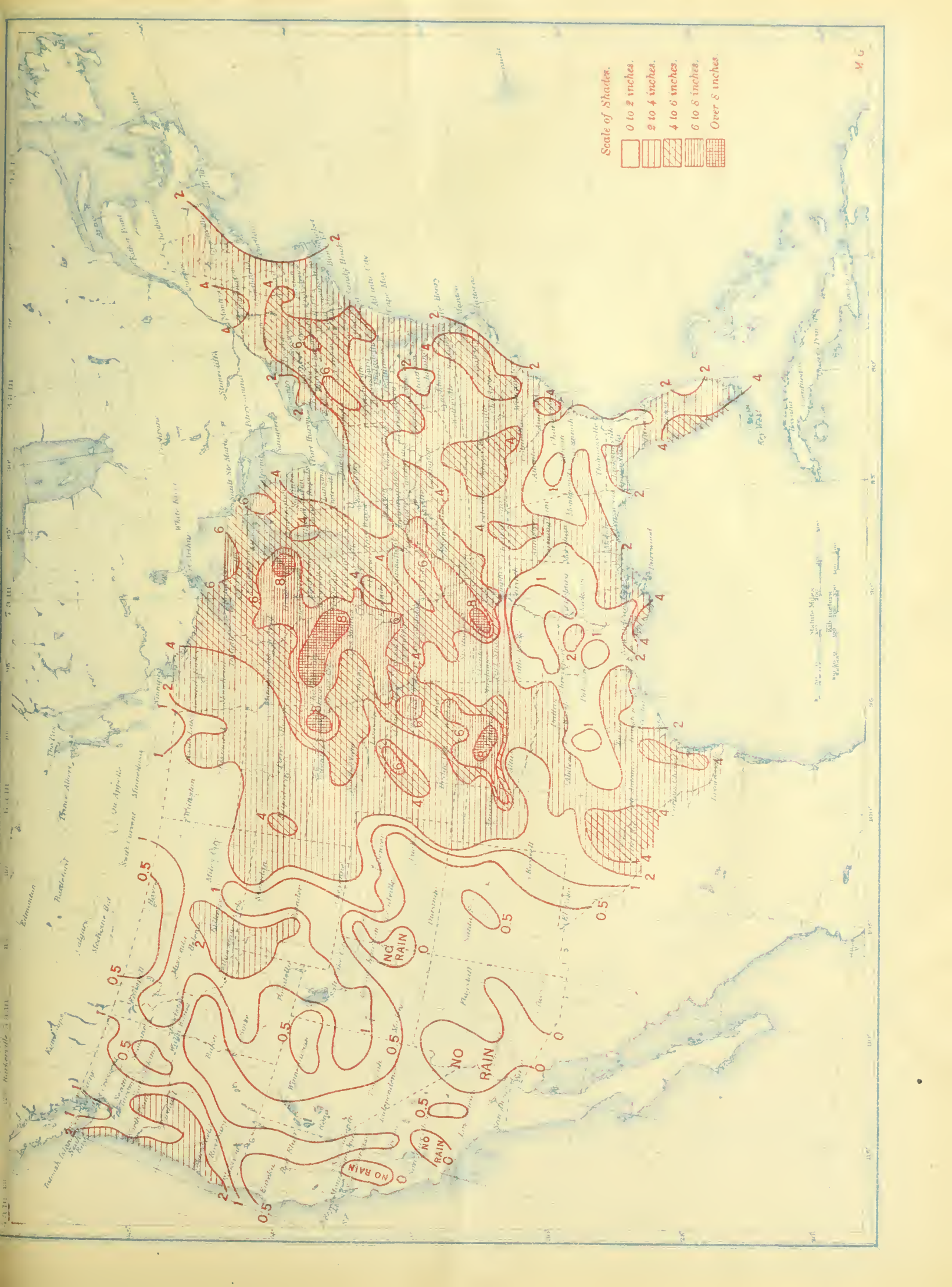
Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded. ‡ Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing. * Precipitation included in the next following measurement. ** Precipitation for 24-hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.			Moisture.		Sun- shine
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.		Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	
							Miles per hour.	Direction.				Date.
Atlantic City.....	30.10	30.45	16	29.56	10	8	25	s.	10	82	61
Cape May City.....	30.12	30.43	16	29.78	10	9	30	nw.	1	79	67
Long Branch.....	30.09	30.49	16	29.57	10	11	59	nw.	10	79	67
Newark.....	30.06	30.47	16	29.58	10	12	54	nw.	1	74	66
New York, N. Y.....	30.06	30.48	16	29.54	10	10	38	nw.	27	87	63
Palisades Park.....	30.07	30.46	16	29.55	10	12	45	nw.	1	85	60
Philadelphia, Pa.....	30.07	30.47	16	29.55	10	12	45	nw.	1	85	60
Sandy Hook.....	30.07	30.46	16	29.55	10	12	45	nw.	1	85	60
Trenton.....	30.06	30.44	16	29.52	10	11	60	w.	10	79	69

Daily temperatures for May, 1918.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.		
<i>The Highlands and Kittatinny Valley</i>																																		
Belvidere.....	Maximum...	65	69	75	76	74	89	84	78	77	83	70	78	81	75	78	75	79	83	83	84	78	76	78	72	74	76	86	88	75	60	77	77.3	
	Minimum...	50	36	48	48	40	54	55	62	42	52	44	53	66	57	54	48	41	47	61	56	65	63	61	46	54	65	58	65	60	53	55	53.5	
Charlotteburg.....	Maximum...	72	65	70	69	75	87	81	80	73	82	70	77	67	75	75	79	80	79	80	74	73	77	65	69	74	78	86	82	53	73	74.7 ^b		
	Minimum...	48	38	50	44	38	54	53	63	37	51	42	44	55	57	41	31	36	49	47	61	59	60	43	47	59	54	64	59	49	49	49.4 ^a		
Dover.....	Maximum...	62	78	72	74	76	89	84	79	75	82	71	70	79	72	78	71	81	83	81	73	74	79	67	72	72	86	90	69	57	73	75.6 ^a		
	Minimum...	43	38	52	47	42	55	58	52	41	51	43	48	60	54	46	44	37	43	58	54	63	62	57	46	50	58	55	65	57	50	53	51.0	
Layton.....	Maximum...	66	71	73	74	80	91	86	78	76	83	73	76	83	77	73	80	82	83	80	83	79	78	79	73	72	75	86	93	75	63	79	78.1 ^a	
	Minimum...	44	33	48	43	42	54	53	62	36	55	43	51	63	53	62	42	37	42	56	55	62	62	59	43	54	60	54	63	58	51	53	51.4	
Newton.....	Maximum...	67	68	71	71	74	87	83	75	73	80	69	71	78	70	73	73	78	80	79	80	76	76	76	69	70	71	81	87	76	63	74	74.8 ^a	
	Minimum...	50	34	50	49	44	58	60	60	60	60	51	41	50	61	51	43	46	43	58	56	53	61	60	45	56	61	56	64	59	50	55	52.6 ^b	
Phillipsburg.....	Maximum...	62	67	76	65	65	89	84	79	78	84	70	80	84	73	79	76	83	85	85	79	78	80	75	76	76	89	89	70	59	79	78.0		
	Minimum...	43	39	51	50	47	53	58	55	44	52	44	52	61	56	45	48	42	49	60	58	64	63	60	50	54	62	58	65	56	52	55	53.2 ^a	
Sussex.....	Maximum...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
	Minimum...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
<i>The Red Sandstone Plain.</i>																																		
Bergen Point.....	Maximum...	64	68	.....	73	68	.....	86	80	70	85	70	.....	84	73	75	69	76	79	81	.....	74	76	81	69	72	76	85	.....	.....	72	75.2 ^a		
	Minimum...	47	39	46	50	49	54	62	58	48	51	47	51	56	63	53	51	42	59	55	.....	64	56	61	54	54	52	55	58	56	.....	53.2 ^a		
Boonton§§.....	Maximum...	63	67	75	74	75	87	82	78	73	81	71	72	80	73	78	73	83	80	78	81	74	75	79	69	72	78	81	89	70	57	74	75.5	
	Minimum...	51	42	43	46	43	50	55	60	39	47	45	45	54	59	44	43	35	42	52	52	60	62	45	49	55	55	56	63	51	51	50.1		
Elizabeth.....	Maximum...	65	68	76	76	75	91	87	81	77	86	81	68	84	74	79	72	83	83	82	86	79	77	83	76	75	79	86	91	72	59	76	78.3	
	Minimum...	52	37	49	50	48	54	61	64	45	50	46	48	58	59	48	47	38	45	54	56	64	61	63	47	52	62	57	67	69	52	52	53.1 ^a	
Flemington.....	Maximum...	71	68	75	74	74	90	85	81	80	83	80	81	82	79	73	83	82	83	83	78	79	81	81	76	75	88	90	78	62	78	79.1		
	Minimum...	51	38	44	49	45	47	51	61	42	49	46	50	62	68	49	47	40	46	55	55	65	63	62	48	54	67	58	66	60	53	55	52.8 ^a	
Highwood.....	Maximum...	61	69	75	71	70	89	85	80	74	77	72	62	78	70	74	69	75	79	79	81	73	72	79	69	71	74	80	89	74	61	71	74.3	
	Minimum...	48	35	46	49	47	51	58	63	42	53	46	48	57	60	45	45	38	43	56	57	64	61	63	45	51	62	55	65	60	50	53	52.1	
Jersey City.....	Maximum...	64	68	76	75	72	91	84	82	74	79	72	70	82	73	77	70	74	78	78	81	78	74	73	72	74	77	84	91	72	58	73	74.8 ^a	
	Minimum...	44	42	50	53	51	55	64	67	51	54	47	49	64	60	56	54	50	55	58	59	63	61	63	55	56	62	57	67	54	55	56	55.9	
Lambertville.....	Maximum...	71		70	70	72	82	86	77	75	81	64	70	78	70	78	72	70	76	80	77	79	82	77	77	68	73	73	87	86	70	58	73	74.8 ^a
	Minimum...	46	37	45	50	46	54	60	64	41	51	46	50	.....	58	48	47	42	48	57	58	59	.....	62	47	50	64	59	65	57	53	55	52.5 ^b	
Little Falls.....	Maximum...	62	68	74	75	75	88	86	79	75	85	72	70	84	74	78	73	80	80	81	85	77	81	80	70	76	80	84	91	75	61	75	77.3	
	Minimum...	45	42	52	50	46	53	59	54	43	54	47	50	57	52	54	44	39	44	54	55	64	63	60	48	51	60	58	67	60	52	56	52.7	
Newark.....	Maximum...	62	70	75	73	70	90	86	80	75	85	71	65	83	73	77	70	79	79	78	84	74	75	81	68	73	76	84	89	74	59	74	75.9	
	Minimum...	50	42	51	52	49	57	65	57	54	57	53	57	60	56	51	47	53	57	61	60	65	61	65	54	56	60	57	67	59	52	53	56.1	
New Brunswick.....	Maximum...	74	66	73	73	75	88	86	79	77	84	80	72	83	81	77	68	79	82	81	82	80	77	80	78	75	75	88	87	80	58	78	77.9	
	Minimum...	50	38	48	50	47	57	61	65	45	50	51	49	60	58	45	48	40	50	55	55	63	62	63	48	54	65	56	65	56	51	54	53.6	
Palisades Park.....	Maximum...	62	68	75	73	67	89	84	80	74	79	71	64	81	72	75	70	77	80	81	72	74	80	68	73	77	82	90	70	57	75	74.8		
	Minimum...	45	36	49	50	47	52	62	52	43	52	46	49	58	54	48	45	39	45	56	57	62	61	55	49	51	57	56	66	57	51	52	51.7	
Paterson.....	Maximum...	67	71	77	74	73	92	89	83	79	86	81	66	83	73	81	74	84	84	83	84	80	77	82	73	75	77	85	93	75	66	75	78.7	
	Minimum...	51	40	51	51	48	52	61	66	48	52	46	50	56	59	50	49	43	47	56	56	64	62	63	50	52	63	57	68	64	60	51	54.4	
Plainfield.....	Maximum...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
	Minimum...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		
Somerville.....	Maximum...	73	68	73	75	76	89	86	79	75	82	80	74	81	81	78	74	81	82	81	82	78	78	80	77	75	76	87	88	74	60	75	78.0	
	Minimum...	49	36	43	46	52	50	52	59	37	46	45	47	60	57	44	44	35	42	51	51	61	61	45	52	63	56	63	58	50	54	50.6		
South Orange.....	Maximum...	62	68	74	73	75	87	84	79	74	84	70	65	81	72	75	69	78	79	80	83	74	77	80	66	74	77	83	88	72	60	75	75.4	
	Minimum...	46	40	48	51	49	57	64	59	46	52	47	49	59	60	53	48	41	47	56														



Scale of Shades.

- 0 to 2 inches.
- 2 to 4 inches.
- 4 to 6 inches.
- 6 to 8 inches.
- Over 8 inches.

Scale of Miles.
0 10 20 30 40 50 60 70 80 90 100
Scale of Feet.
0 100 200 300 400 500 600 700 800 900 1000

1.05
NJ

U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU

CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

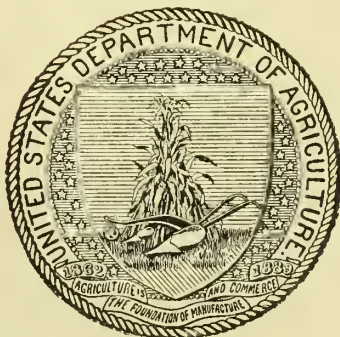
NEW JERSEY SECTION

JUNE, 1918.

BY

G. HAROLD NOYES

METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
JULY 18 1918.

Departure of the Mean Temperature from the Normal, June, 1918.



Shaded portions show excess (+).
Unshaded portions show deficiency (-).
Lines show amount of excess or deficiency.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

VOL. XXIII. TRENTON, N. J., JUNE, 1918. No. 6.

GENERAL SUMMARY.

The first week of June was very warm, but was followed thereafter by persistently cool weather for the remainder of the month, and probably except for this first week, would have closely approximated the coldest June on record. Maxima of 90° and above, occurred in practically all sections on the first two days, except along the immediate shore. A cool wave of considerable severity occurred on the 20th to 23d, resulting in light frost on the 20th and 21st at some points, and temperatures of several degrees below freezing at the bog surface on cranberry marshes. Other weather elements were nearly normal, except the wind direction which prevailed from the northwest, although in southern districts the wind movement was from a southerly quadrant. The amount and frequency of rain, which occurred generally with thunder and lightning, did not vary greatly from normal, and the principal days of occurrence were the 5th-6th, 7th, 11th-12th, 14th, and 22d, and also in northern districts the 10th, 21st and 25th, and in southern sections on the 15th and 26th. Occurrences of hail were unusually numerous, and are mentioned in a subsequent paragraph.

Vegetation had gained such a substantial start in the earlier weeks of spring, that the cool weather of June did not prove to be much of a drawback.

The mean stage of the Delaware River at Phillipsburg was 2.4 feet, the highest being 4.3 feet on the 1st. At Trenton the mean stage was 1.8 feet, which was 0.1 foot below normal; the highest water was 3.0 feet on the 1st.

The temperature departure from normal for the year 1918, to date, by sections is: The Highlands, -0.8°; Red Sandstone Plain, -0.6°; Southern Interior, -0.4°; The Seacoast, -1.3°. The precipitation accumulated departure from normal for the year 1918 to date is: The Highlands, -0.39 inch; Red Sandstone Plain, -2.49 inches; Southern Interior, -1.55 inches; The Seacoast, -3.04 inches.

Storm warnings were displayed on the coast on the 11th, 21st and 26th.

TEMPERATURE.

The monthly mean temperature of the State, as deduced from observations of 35 stations, was 66.3°, which was 2.8° below normal. The highest temperature was 96° at Tuckerton on the 2d, and the lowest, 32° at Boonton on the 21st. The highest monthly temperature was 68.9° at Jersey City, and the lowest, 61.5° at Charlotteburg. The greatest daily range of temperature was 43° at Indian Mills on the 21st. Deficiencies in warmth were fairly evenly distributed over all portions of the State.

PRECIPITATION.

The average total rainfall of the State, as deduced from observations of 37 stations, was 3.43 inches, which was 0.37 below normal. The greatest monthly quantity of rain fell at Flemington, 6.21 inches, and the least, 1.35 inches at Bridgeton. All portions of the State were sufficiently moist, except the southern third, where the need of rain was manifest at the close of the month. The greatest amount of rain in 24 consecutive hours was 2.27 inches at Newark on the 21st-22d. The average number of days on which 0.01 inch or more rain fell was 8, which was 1 less than normal.

WIND.

The prevailing wind direction was from the northwest, an unusual feature for June, with an approximate velocity of 12

miles per hour, which was somewhat greater than usual. The highest velocity for the month, sustained for 5 consecutive minutes was, 60 miles per hour from the southwest, at Long Branch on the 5th.

SUNSHINE AND CLOUDINESS.

The average number of clear days throughout the State was 15, which was 3 more than normal; partly cloudy, 9, which was 2 less than normal; cloudy, 6, which was 1 less than normal. The approximate percent. of possible sunshine was 64, probably about a normal value.

MISCELLANEOUS.

Thunderstorms occurred in some portion of the State on the 2d, 3d, 5th, 7th, 10th, 11th, 12th, 14th, 15th, 21st, 22d, 29th, 30th. Light frost occurred on the 20th and 21st. Fog was reported on the 1st, 5th-6th, 22d, 29th and 30th. Solar halos were observed on the 8th and 25th. The partial solar eclipse was observed on the 8th.

HAIL.

June 5th, near Flemington, hail caused damage in spots over a path 2 to 3 miles wide. Estimated loss \$2500.

June 12th, hail fell over a strip about 2 miles wide from Princeton to north of Freehold. The heaviest damage occurred in a strip about one-eighth mile wide, where it was from 30 to 60 per cent or from \$25,000 to \$30,000. Another storm crossed Gloucester, southern Camden, southern Burlington and northern Atlantic counties in a path from 4 to 5 miles wide. The damage was chiefly to peaches, tomatoes and peppers and was estimated at from \$7,000 to \$8,000. In southern Cumberland County, near Port Norris, hail damaged tomatoes and beans in a belt about 3 miles wide.

June 14th, hail in southern Camden County damaged apples, peaches and tomatoes, in a belt, about 5 miles wide. Hail also occurred in southern Warren and western Hunterdon counties.

June 22d, a severe storm over Delaware Bay touched Fortescue but did not reach many fields. Five cottages were demolished. Automobile tops were punctured by the hail. This storm seems to have crossed thinly populated sections north of Cape May County.

COMPARATIVE DATA FOR JUNE.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more prec.
1885.....	68.7	97	39	1.79	3.37	0.72	.....	.....	.....	.....
1886.....	67.1	91	41	3.38	5.79	2.22	.....	.....	.....	.....
1887.....	68.2	97	42	6.77	10.29	4.21	.....	.....	.....	10
1888.....	70.8	99	39	2.59	5.69	1.67	.....	.....	.....	6
1889.....	69.9	91	40	3.73	6.75	2.39	.....	.....	.....	10
1890.....	70.7	95	42	3.59	5.16	0.99	.....	.....	.....	7
1891.....	69.7	102	38	2.92	6.71	1.24	14	13	.....	5
1892.....	72.4	98	44	3.85	6.12	1.58	10	12	.....	11
1893.....	69.7	103	40	2.95	7.02	0.48	10	11	9	.....
1894.....	70.6	102	35	2.28	5.90	0.99	14	11	.....	9
1895.....	71.7	103	39	3.24	5.99	0.93	11	11	.....	10
1896.....	68.1	96	37	5.46	13.45	2.64	12	10	.....	10
1897.....	66.1	95	35	3.38	5.50	2.12	10	13	7	.....
1898.....	70.1	100	38	2.10	3.54	1.13	14	12	4	.....
1899.....	72.3	103	38	2.50	4.34	1.01	15	10	.....	7
1900.....	70.4	97	39	3.08	4.91	1.10	12	12	5	.....
1901.....	70.0	103	35	1.57	4.36	0.73	18	8	.....	5
1902.....	67.5	99	37	6.57	10.21	4.54	14	11	.....	11
1903.....	64.0	92	37	7.68	15.02	2.39	6	10	14	15
1904.....	68.6	100	34	3.13	5.44	1.91	13	10	7	12
1905.....	68.3	96	35	3.43	8.71	1.67	11	12	7	12
1906.....	70.4	98	38	4.48	9.18	1.45	11	11	.....	12
1907.....	64.7	96	31	4.41	6.85	3.15	12	10	8	10
1908.....	69.9	99	35	2.32	4.63	0.77	16	12	2	4
1909.....	70.0	99	36	3.26	5.70	1.71	9	10	11	12
1910.....	66.9	95	34	5.17	8.01	2.66	9	10	11	13
1911.....	68.9	97	40	5.36	10.11	2.84	9	12	9	14
1912.....	68.0	98	33	1.94	3.61	0.91	9	12	9	.....
1913.....	69.1	98	31	1.80	3.76	0.68	19	8	3	5
1914.....	68.5	98	35	2.66	4.85	1.09	16	9	6	7
1915.....	67.0	95	36	3.12	6.51	1.40	13	10	7	11
1916.....	64.7	87	36	4.20	5.99	2.22	10	9	11	13
1917.....	68.9	95	40	4.27	7.14	2.80	13	10	7	12
1918.....	66.3	96	32	3.43	6.21	1.35	15	9	6	8

ERRATA.

APRIL, 1918.—Trenton; departure from normal temperature -0.3, should read +0.3.

MAY, 1918.—Trenton; maximum temperature on the 24th 67, mean maximum temperature 75.9, mean temperature 65.1, departure from normal +4.0, greatest daily range 32, and total precipitation 4.47, should read, respectively, 71, 76.0, 65.2, +4.1, 36, and 4.37; Philadelphia; mean temperature 67.9, should read 67.2.

Climatological data for June, 1918.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation .01 in. or more.	Clear.	Pt. cloudy.			Cloudy.	
<i>The Highlands and Kittatinny Valley.</i>																					
Belvidere.....	Warren.....	289	27	66.1 ^b	-2.9	91	1†	43	16	35	3.71	-0.69	1.38	0	8	18	8	4		Samuel J. Hixson. George S. Briggs. Brice E. Riker. William C. Harris.	
Charlotteburg.....	Passaic.....	719	26	61.5 ^a	-4.0	89	1	34	21	38	2.57	-1.69	1.45	0	7	20	9	1	w.		
Culvers Lake††.....	Sussex.....	848	17						34	23		3.82	-0.02	1.23	0	9	19	6	5		e.
Dover.....	Morris.....	600	34	64.2 ^a	-3.0	92	1	40	21	38	4.10	-0.02	1.39	0	8	7	14	9	.....		
Layton.....	Sussex.....	480	18	64.2	-2.1	93	1	37	20	41	3.49	+0.07	1.12	0	9	19	6	5	w.	A. M. Depue. Irving G. Kern. D. Wilson Smith.	
Newton.....	Sussex.....	769	37	64.4 ^a	-3.3	89	1	42	20†	30	4.38	+0.59	1.50	0	10	13	8	9	w.		
Phillipsburg.....	Warren.....	363	36	67.0	-2.7	93	1	45	16†	36	4.88	+0.73	1.67	0	9	19	3	8	nw.		
Means and extremes.....				64.6	-3.0	93	1	33	23	41	3.85	-0.15	1.67	0	9	16	8	6	w.		
<i>The Red Sandstone Plain.</i>																					
Bergen Point††.....	Hudson.....	37	21	66.2	-2.6	93	1	46	15	31	4.58	+0.63	1.66	0	6	9	19	2	se.	William H. Mitchell. J. W. Demmers. Paul Molitor. L. B. Bonnett.	
Boonton.....	Morris.....	400	28	64.0	.....	90	2	32	21	37	3.69	-0.05	1.95	0	7	22	4	4	sw.		
Chatham.....	Morris.....	330	16	.....	.....	.....	.....	.....	.....	.....	3.91	-0.13	1.26	0	10	14	14	2	.....		
Elizabeth.....	Union.....	45	39	67.0	-4.2	94	1	43	21	35	5.73	+2.13	1.70	0	9	11	14	5	se.		
Flemington.....	Hunterdon.....	140	30	67.5	-1.6	94	2	45	16†	36	6.21	+1.84	1.59	0	9	17	6	7	w.	Hiram E. Deats. Charles J. Bates. S. K. Pearson, Jr. Thomas K. Hunt.	
Highwood.....	Bergen.....	90	29	64.4	-3.9	90	1†	42	16†	34	2.93	-0.85	1.54	0	8	13	11	6	nw.		
Jersey City.....	Hudson.....	10	19	68.9	-1.1	95	1†	50	23	29	4.52	+1.22	1.75	0	8	10	13	7	nw.		
Lambertville.....	Hunterdon.....	80	31	65.7 ^a	-4.6	90	1	46	21	27	.....	.....	0.97	0	.....	13	5	12	w.		
Little Falls.....	Passaic.....	180	15	66.4		94	1	43	21	36	3.47	-0.81	1.64	0	10	19	3	8	w.	Montclair Water Co. Prof. William Wiener. N. J. Experiment Station. George P. Kirsten.	
Newark††.....	Essex.....	159	76	67.1	-2.6	92	1	49	23	28	5.36	+1.73	2.27	0	8	17	6	7	se.		
New Brunswick.....	Middlesex.....	110	65	67.0	-2.6	92	1	45	21	31	.....	.....	1.34	0	.....	14	14	2	nw.		
Palisades Park.....	Bergen.....	80	3	65.2	.....	93	1†	43	16	34	3.80	.....	1.91	0	6	14	12	4	sw.		
Paterson.....	Passaic.....	80	47	67.8	-2.3	95	1	47	21	31	2.23	-2.09	1.07	0	7	4	7	19	nw.	Marion T. Probert. M. S. Taylor A. A. Macdonald. Dr. W. J. Chandler.	
Pompton Plains.....	Morris.....	195	16	.....	.....	.....	.....	.....	.....	.....	3.30	-0.86	1.97	0	8	.....	.....	.....	.....		
Somerville.....	Somerset.....	60	36	65.6	-3.6	92	1	40	16†	39	4.70	+0.55	1.76	0	8	14	11	5	nw.		
South Orange.....	Essex.....	200	48	66.6	-2.2	91	1	46	21	28	4.03	+0.47	1.60	0	9	17	10	3	w.		
New York, N. Y.....		365	48	66.4	-2.1	91	2	47	23	24	4.12	+0.86	1.55	0	8	8	12	10	nw.	U. S. Weather Bureau.	
Means and extremes.....				66.4	-2.8	95	1†	32	21	39	4.18	+0.29	2.27	0	8	14	10	6	nw.		
<i>The Southern Interior.</i>																					
Bridgeton.....	Cumberland.....	30	37	68.7	-4.7	95	1	49	16†	32	1.35	-2.42	0.45	0	7	19	7	4	sw.	Henry A. Jorden. D. S. B. McCoy. W. Rex B. Sutch. G. H. Parkhurst.	
Burlington.....	Burlington.....	12	32	68.7	-2.0	93	1	47	21	33	3.93	+0.01	1.15	0	10	19	5	6	nw.		
Clayton.....	Gloucester.....	126	26	68.0	-3.4	93	1†	45	21	35	2.32	-1.08	0.83	0	9	17	8	5	nw.		
Hammonton.....	Atlantic.....	103	16	.....	.....	.....	.....	.....	.....	.....	2.83	-0.36	1.15	0	8	20	8	2	s.		
Hightstown.....	Mercer.....	120	26	67.3 ^c	-2.1	93	1	42	21	31	4.86	+0.85	1.98	0	9					G. Franklin Eldridge. F. B. Jones. James M. Armstrong. R. W. Holman.	
Imlaystown††.....	Monmouth.....	185	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	10	12	12	6	nw.		
Indian Mills.....	Burlington.....	76	29	66.4	-4.6	94	1	40	16	43	1.94	-1.85	0.57	0	10	12	5	12	e.		
Lakewood.....	Ocean.....	54	15	66.4	-1.2	93	1	45	23	34	2.96	-0.71	1.34	0	6	13	5	12	.....		
Moorestown.....	Burlington.....	75	56	68.1	-2.1	91	1	45	21	31	2.29	-1.51	0.77	0	8	15	12	3	e.	Geo. L. Gillingham. William L. Flick. Lincoln Van Gilder. U. S. Weather Bureau.	
Northfield.....	Atlantic.....	25	11	.....	.....	.....	.....	.....	.....	.....	1.75	-1.82	0.94	0	7	.....	.....	.....	.....		
Pleasantville.....	Atlantic.....	26	20	.....	.....	.....	.....	.....	.....	.....	1.50	-2.09	0.73	0	7	20	4	6	.....		
Trenton.....	Mercer.....	190	47	67.2	-2.3	92	1	48	23	29	3.78	+0.29	1.27	0	9	9	10	11	s.		
Tuckerton.....	Ocean.....	23	25	66.2	-2.8	96	2	43	9	35	1.43	-2.34	0.71	0	6	11	13	6	sw.	Frank R. Austin. H. C. Himes. Baron de Hirsch Agr. Sch. U. S. Weather Bureau.	
Vineland.....	Cumberland.....	109	50	68.8 ^a	-2.8	94	1†	50	16†	33	1.56	-2.02	0.61	0	8	19	8	3	sw.		
Woodbine.....	Cape May.....	43	27	65.7 ^b	-3.3	93	2	41	23	33	2.00	-1.50	1.30	0	6	13	8	9	e.		
Philadelphia, Pa.....		117	48	69.6	-1.6	92	2	52	23	26	2.15	-1.15	0.82	0	7	11	11	8	nw.		
Means and extremes.....				67.4	-2.8	96	2	40	16	43	2.46	-1.18	1.98	0	8	16	8	6	sw.		
<i>The Sea Coast.</i>																					
Asbury Park.....	Monmouth.....	22	29			95	2						1.83	0						Miss Dorothy A. Alexander. U. S. Weather Bureau. U. S. Weather Bureau. William D. Martin, Jr. U. S. Weather Bureau.	
Atlantic City.....	Atlantic.....	16	45	65.3	-1.5	91	2	50	23	26	1.94	-1.09	1.02	0	9	11	10	9	s.		
Cape May City.....	Cape May.....	17	34	65.8	-1.9	93	2	54	20	27	2.62	-0.42	1.43	0	7	12	9	9	s.		
Long Branch.....	Monmouth.....	25	11	64.0	-3.5	93	2	47	23	22	5.87	+1.97	2.16	0	9	14	8	8	nw.		
Sandy Hook.....	Monmouth.....	22	20	65.7	-2.7	89	1	51	23	26	3.30	-0.67	1.02	0	8	11	8	11	nw.		
Means and extremes.....				65.2	-2.4	95	2	47	23	27	3.43	-0.05	2.16	0	8	12	9	9	nw.		
For the State.....				66.3	-2.8	96	2	32	21	43	3.43	-0.37	2.27	0	8	15	9	6	nw.		

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

†† Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Imlaystown is Cream Ridge.

Daily precipitation for June, 1918.

Stations.	Watershed.	Day of month.																														Total.	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		31
<i>The Highlands and Kittatinny Valley.</i>																																	
Belvidere.....	Delaware.....					.22		.38			.31	.48	.58		.13								1.38							.23		3.71	
Charlotteburg.....	Passaic.....					.07		.25				.35	.32		T.				.08				1.45			.05	T.					2.57	
Culvers Lake.....	Delaware.....					.65		.82			.20	.02	.72		.08							T.	1.23	.05		.05						3.82	
Dover.....	Passaic.....					1.07		.25			*	.97	.29		.92								1.39			.11						4.10	
Layton.....	Delaware.....					.24		.97			.33	.03	.51		.22							T.	1.12	.03		.04						3.94	
Newton.....	Delaware.....					.66	.01	1.06			.48	.17	.37	T.	.06							T.	1.50	.01		.06						4.38	
Phillipsburg.....	do.....					1.67		.18			.70	.05	.16		.96	T.							1.01	T.		T.				.05		4.88	
Sussex.....	Hudson.....																																
<i>The Red Sandstone Plain.</i>																																	
Bergen Point.....	Coast.....					.72		1.10			T.	1.02			.08								.07	1.59								4.58	
Boonton|||.....	Passaic.....	.02				.63	.28	.01				.76	T.	T.	T.								1.95		T.	.04	*					3.69	
Chatham||.....	do.....					.60	.51					1.10	.18	.09		.10							1.26		.02	*	.05					3.94	
Elizabeth.....	Coast.....	T.				.73		1.70			*	1.40	.28		.03								* 1.57	T.		.02				T.		5.73	
Flemington.....	Raritan.....					1.09	.05	.98			1.05	1.59	.19		.40								T.	.85	T.		.01			T.	T.	6.21	
Highwood.....	Hackensack.....					.01		.44			.23	.42	.22		T.								T.	1.54	.04		.03					2.93	
Jersey City**.....	Coast.....					.09		1.75			.78	.06	.20		T.								.08	1.49	T.		.07					4.52	
Lambertville.....	Delaware.....					.21		.87					.84		.13								*	.97			T.	T.				§	
Little Falls**.....	Passaic.....					.06	.30	.25			.75	.08	.20		T.								.08	1.64	.04	.07						3.47	
Newark**.....	Coast.....					.40		1.32			.75	.35	.16		T.								.19	2.08	T.		.11			T.		5.36	
New Brunswick.....	Raritan.....							.64				1.34	.26		.34								1.12	T.		T.						§	
Palisades Park.....	Hackensack.....	T.				.01		.90				.80	.13		T.								1.91	T.		.05						3.80	
Paterson.....	Passaic.....					T.		.20			.12	.60	.18		T.								1.07	.02		.04				T.		2.23	
Plainfield**.....	Raritan.....																																
Pompton Plains||.....	Passaic.....	.17						T.	.23	.03		.53	.28	.05									1.97			.04						3.30	
Somerville.....	Raritan.....					.15	.10	1.76			.18	1.42	.30		.36									.43								4.70 ⁹	
South Orange.....	Rahway.....					.37		.64			*	1.20	.14		T.								*	1.60	.03		.05					4.03	
New York, N. Y***.....	Coast.....					.09		1.22			.96	.04	.16	T.	T.								.25	1.30	T.		.10			T.		4.12	
<i>The Southern Interior.</i>																																	
Bridgeton.....	Coast.....			.25				T.				.10	.45		.18								*	.17				.05			.15	1.35	
Burlington.....	Delaware.....				.21	.87	.60					.62	.15		*	.30							*	1.15	.03							3.93	
Clayton.....	Maurice.....			.04		.15	.16					.09	.65	T.	.13	.26				.01			T.	.83			T.					2.32	
Hammonton.....	Mullica.....			.36		.04	.22					1.15		.08	.13					.14				.71								2.83	
Hightstown.....	Raritan.....					1.98	.38				.01	1.06	.32		.11								.86			.13				.01		4.86	
Imlaystown.....	Delaware.....																																
Indian Mills.....	Mullica.....			.10			.17	.14				.05	.33		.04	.41				.10			T.	.57			T.			.03		1.94	
Lakewood.....	Metedeconk.....			.03		1.34	.43					T.			.08								*	1.08						T.		2.96	
Moorestown.....	Delaware.....			.05		.77	.31					.14	.16		.04	.17				T.			.65									2.29	
Northfield.....	Coast.....			.08			.54					.04		.06	.02								.94			.07						1.75	
Pleasantville.....	Coast.....			.05			.36					.03		.07	.20								T.	.73			.06					1.50	
Trenton***.....	Delaware.....			T.	1.27		.32			1.06	.08	.16	T.	.07									.04	.77	T.		.01	T.		T.	T.	3.78	
Tuckerton.....	Coast.....			.21		T.	.17					.11	T.	.09	.14					T.			.71			T.						1.43	
Vineland.....	Maurice.....			.56	T.		.03			T.	T.	.16		.11						T.			.61	.02		.06				.01		1.56	
Woodbine.....	Coast.....			.15			.12					.20		.06									1.30			.17						2.00	
Philadelphia, Pa..	Delaware.....	T.	T.			.35	T.	.45			.16	.09		.28						T.			.07	.75	T.						T.	2.15	
<i>The Sea Coast.</i>																																	
Asbury Park.....	Coast.....					1.00																	.07	1.83			.04					§	
Atlantic City***.....	do.....	.13	.03				.40					.08		.20						T.			.08	.94			.07			T.	.01	1.94	
Cape May City.....	do.....			.70			.05				.76	.03	.39		.13								.05	1.43			.22					2.62	
Long Branch**.....	do.....					1.16	.77				.76	.03	.39		.50					.10			.19	1.97								5.87	
Sandy Hook***.....	do.....			T.	.52		.67				.69	.13	.11		.16					T.			.20	.82	T.		T.			T.	T.	3.30	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded.
|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.
* Precipitation included in the next following measurement. **Precipitation for 24-hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

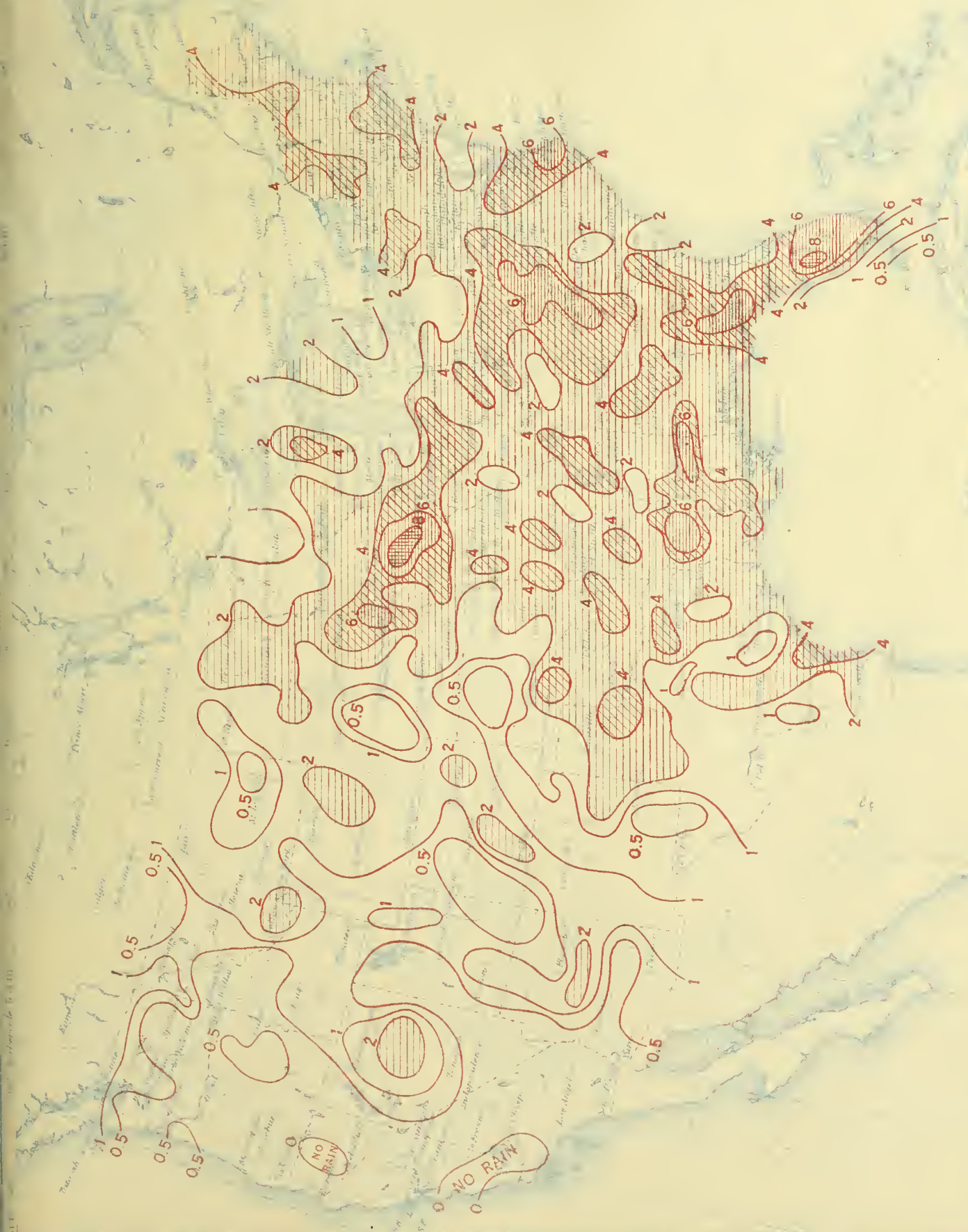
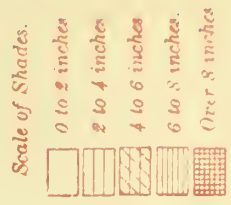
MISCELLANEOUS DATA.

Stations.	Pressure.					Hourly velocity.	Wind.			Moisture.		Sun- shine.
	Monthly mean.	Highest.	Date.	Lowest.	Date.		Highest.			Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	
							Miles per hour.	Direction.	Date.			
Atlantic City.....	29.96	30.27	15	29.40	12	s	31	me.	27	76	76	61
Cape May City.....	29.98	30.26	16	29.52	12	9	34	nw.	22	68	63	75
Long Branch.....	29.96	30.26	16	29.37	12	15	60	sw.	5	68	66	65
Newark.....	29.94	30.25	16	29.38	12	16	55	nw.	23	67	61	71
New York, N. Y.....	29.94	30.25	16	29.35	12							
Palisades Park.....	29.94	30.25	16	29.35	12							
Philadelphia, Pa.....	29.95	30.24	16	29.38	12	10	31	nw.	5	78	73	62
Sandy Hook.....	29.95	30.27	16	29.35	12	15	45	s.	22	74	74	53
Trenton.....	29.93	30.24	16	29.36	12	11	34	nw.	23	72	65	61

§ Two directions and dates. * 7 a. m. † 9 p. m.

Daily temperatures for June, 1918.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.	
<i>The Highlands and Kittatinny Valley</i>																																	
Belvidere.....	Maximum	91	91	98	81	85	79	79	75	80	77	66	81	72	64	78	78	82	80	80	73	72	71	61	79	74	77	78	79	75	88	77.8	
	Minimum	65	65	64	51	63	59	67	49	48	59	60	55	49	46	43	50	63	45	46	45	45	50	53	53	51	50	58	61	54.4			
Charlotteburg.....	Maximum	89	88	79	79	82	70	72	72	76	74	68	78	67	65	73	76	80	80	77	75	69	70	54	75	70	72	74	67	70	83	74.1	
	Minimum	61	72	61	50	56	47	41	53	55	56	52	45	41	35	42	60	42	42	34	54	41	51	42	41	45	40	55	56	48.9			
Dover.....	Maximum	92	91	84	80	84	74	79	74	80	73	63	80	70	70	76	79	70	78	80	70	64	75	57	78	73	74	75	74	72	83	76.1	
	Minimum	66	69	64	49	58	49	47	47	60	56	58	54	50	45	41	48	61	48	44	40	53	45	51	50	49	51	46	55	60	52.4		
Layton.....	Maximum	93	89	82	80	81	75	79	79	75	66	83	75	68	75	79	83	83	80	70	67	71	57	78	75	78	79	78	74	86	77.2		
	Minimum	63	63	59	46	56	60	56	47	44	53	59	53	46	43	38	47	63	44	37	42	55	43	47	42	58	47	45	58	60	51.1		
Newton.....	Maximum	89	86	82	79	80	73	75	72	77	74	65	78	74	66	73	75	80	76	77	71	66	70	61	75	73	74	75	72	84	74.9		
	Minimum	65	71	64	56	60	58	59	46	59	58	57	52	51	46	45	52	60	51	42	43	54	42	49	56	50	50	55	60	54.0			
Phillipsburg.....	Maximum	93	90	83	83	87	80	81	83	82	78	66	83	71	77	81	84	81	80	70	74	73	61	79	71	77	80	77	82	78.8			
	Minimum	66	69	66	53	63	61	61	51	50	59	59	55	52	48	45	51	59	51	46	47	53	45	52	54	55	53	51	58	62	55.1		
Sussex.....	Maximum																																
	Minimum																																
<i>The Red Sandstone Plain.</i>																																	
Bergen Point.....	Maximum	93	90	85	77	83	75	80	75	79	76	66	80	70	71	77	71	78	75	79	69	65	76	65	77	76	77	75	69	75	80	76.1	
	Minimum	65	78	69	55	61	61	56	54	51	61	57	57	56	51	46	49	52	58	52	49	49	57	49	51	56	58	58	56	50	63	56.4	
Boonton§§.....	Maximum	89	90	83	79	83	77	80	76	77	74	65	82	71	70	76	77	79	80	79	66	74	62	78	75	77	78	75	72	85	76.9		
	Minimum	54	63	48	55	52	61	51	45	58	55	57	55	49	50	40	46	55	47	47	32	53	47	46	50	49	51	47	56	56	51.0		
Elizabeth.....	Maximum	94	93	86	81	86	79	83	78	81	80	65	82	73	73	79	79	85	79	82	72	68	71	66	80	77	77	75	76	85	79.0		
	Minimum	65	71	67	5	61	59	62	50	50	61	57	58	51	49	44	51	63	51	51	43	57	48	49	52	53	54	52	57	58	55.0		
Flemington.....	Maximum	92	94	89	8	84	80	81	77	78	80	67	8	71	71	78	81	82	78	81	78	74	73	68	80	75	72	76	78	76	87	79.0	
	Minimum	63	71	67	54	58	60	67	52	48	59	58	60	57	51	45	50	63	55	49	45	58	49	53	55	55	55	51	57	62	56.0		
Highwood.....	Maximum	90	90	80	70	77	70	77	80	74	65	79	71	67	77	76	78	75	76	76	67	66	73	64	80	74	73	74	71	74	81	75.0	
	Minimum	65	69	65	50	59	60	52	48	62	56	58	55	49	46	42	51	62	47	48	42	57	47	47	50	53	52	52	58	60	53.9		
Jersey City.....	Maximum	95	95	88	80	83	76	83	79	81	76	64	82	73	73	81	78	80	79	82	72	68	71	65	81	78	76	78	72	78	82	78.3	
	Minimum	66	75	73	61	65	64	66	54	57	62	58	63	58	56	53	54	59	65	59	54	54	58	50	55	56	56	58	59	59	59	59.5	
Lambertville.....	Maximum	90	87	82	77	81	78	80	70	76	81	68	71	73	70	74	78	76	77	76	67	62	72	62	75	70	71	73	73	76	83	75.8	
	Minimum	61	70	66	54	62	61	65	51	50	61	62	55	48	49	49	54	55	49	46	58	48	52	49	56	53	50	57	58	53	55.6		
Little Falls.....	Maximum	94	90	88	84	84	78	83	75	80	78	66	82	72	73	75	80	82	80	81	73	70	65	73	59	80	74	74	75	70	85	78.4	
	Minimum	65	70	63	53	59	60	58	52	48	62	58	59	51	53	45	44	50	55	51	49	43	53	54	51	52	51	50	56	59	54.3		
• Newark.....	Maximum	92	91	84	78	82	75	80	75	79	75	64	82	71	70	76	75	84	78	80	70	63	73	59	80	74	74	75	70	69	80	76.0	
	Minimum	66	76	71	62	64	62	63	54	55	63	57	58	55	55	53	56	62	56	51	50	55	49	53	58	54	56	56	56	60	58.2		
New Brunswick.....	Maximum	92	91	85	82	83	78	81	77	79	80	67	81	76	70	76	78	81	80	80	79	64	75	69	77	75	70	73	71	76	83	77.6	
	Minimum	65	72	65	65	61	60	67	53	52	61	57	58	51	50	48	50	63	53	50	45	57	48	52	55	55	55	55	55	59	56.4		
Palisades Park.....	Maximum	93	93	84	78	80	72	81	77	74	62	82	71	73	77	77	80	77	82	70	67	76	62	80	76	74	74	70	74	79	83	76.6	
	Minimum	66	69	58	53	61	60	58	51	49	61	57	59	51	50	46	43	52	54	48	48	44	53	47	50	51	53	53	51	57	59	53.8	
Paterson.....	Maximum	95	94	86	82	82	73	82	77	83	77	67	84	78	75	80	79	83	80	82	74	68	75	70	80	78	77	78	73	73	85	78.8	
	Minimum	61	71	6	57	61	60	64	53	52	64	57	58	57	51	51	48	53	64	55	49	47	56	48	53	55	54	54	57	60	56.7		
Plainfield.....	Maximum																																
	Minimum																																
Somerville.....	Maximum	92	90	84	79	85	79	82	76	80	80	67	83	71	77	79	81	81	81	71	68	75	71	79	77	73	76	74	76	80	78.3		
	Minimum	59	69	64	49	59	58	65	51	44	57	56	55	51	44	47	40	47	61	48	48	40	56	47	50	50	55	52	47	55	59	52.9	
South Orange.....	Maximum	91	90	84	79	83	80	81	76	79	75	67	82	71	72	76	75	81	76	78	69	65	74	62	79	74	73	75	72	74	82	76.5	
	Minimum	55	72	68	58	62	63	60	53	52	61	57	58	51	54	48	53	57	57	49	46	58	49	53	53	59	56	56	58	61	56.8		
New York, N. Y.....	Maximum	90	91	83	77	78	74	79	73	76	75	61	80	68	64	74	78	80	82	74	68	75	70	80	78	77	78	73	74	67	69	78	74.0
	Minimum	66	76	72	62	63	62	60	52	59	61	56	60	55	55	56	58	58	62	60	53	55	53	47	55	60	58	58	55	60	58.8		
<i>The Southern Interior.</i>																																	
Bridgeton.....	Maximum	95	94	87	81	86	85	82	78	80	85	76	88	75	70	78	79	8															



UNIVERSITY OF ILLINOIS
URBANA

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NJ

U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU

CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

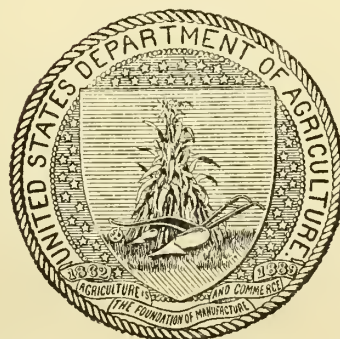
NEW JERSEY SECTION

JULY, 1918.

BY

G. HAROLD NOYES

METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
AUGUST 19, 1918.

Departure of the Mean Temperature from the Normal, July, 1918.



Shaded portions show excess (+).
Unshaded portions show deficiency (-).
Lines show amount of excess or deficiency.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

VOL. XXIII.

TRENTON, N. J., JULY, 1918.

No. 7.

GENERAL SUMMARY.

The weather in July, 1918, in New Jersey was somewhat more pleasant than usually prevails during the mid-summer month. There was a notable absence of warm weather the first half of the month, particularly on the 3d, 8th and 9th, and with a moderate frequency of showers, while from the 19th to the 30th the heat was persistently, though moderately, above normal, with a nearly total absence of rain. There have been but five cooler Julys in this State since records were first compiled in 1885, namely in 1914, 1909, 1895, 1891 and 1889, and the extremes of temperature did not approach the records. On the 30th-31st notably heavy showers fell at Bay Head, Bridgeton, Lakewood, Long Branch and Vineland, the measured amounts at each station except Bay Head being in excess of 4 inches for the 24 hours, and at Bay Head a careful estimation was nearly double that figure. Heavy amounts also fell at nearly all other stations at the same time, but there were some stations in northern counties where the amounts were so small as to cause no comment. This heavy rain, except in the few places which lacked its visitation, brought relief to what was becoming a very bad crop situation, as the weather had been both dry and hot. There was somewhat more than the usual amount of bright sunshine, which with the lack of rain, further contributed to the unfavorable crop condition.

The mean stage of the Delaware River at Phillipsburg was 1.0 foot, the highest stage being 2.2 feet on the 31st. At Trenton the mean stage was 0.6 foot, which was 0.6 foot below normal; the highest stage was 0.9 foot.

The temperature departure from normal for the year 1918, to date, by sections, is: The Highlands, -0.8° ; Red Sandstone Plain, -0.7° ; Southern Interior, -0.7° ; The Seacoast, -1.4° . The precipitation accumulated departure from normal, for the year 1918, to date, by sections, is: The Highlands, -2.10 ; Red Sandstone Plain, -4.31 ; Southern Interior, -1.66 ; The Seacoast, -2.39 .

There were no storm warnings during the month.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 34 stations, was 72.2° , which was 1.4° below normal. The highest temperature was 101° at Elizabeth on the 22d, and the lowest, 39° at Layton on the 3d. The highest monthly mean temperature was 75.0° at Bridgeton, and the lowest, 67.4° at Charlotteburg. The greatest daily range of temperature was 42° at Indian Mills on the 3d. The interior of "The Pines" and the northern counties were the coolest portions of the State.

PRECIPITATION.

The average total rainfall of the State, as deduced from observations of 39 stations, was 3.93 inches, which was 0.90 inch below normal. The greatest monthly amount of rain was 13.60 inches at Long Branch, and the least, 1.20 inches at Cape May

City. The greatest amount of rain in 24 consecutive hours was 6.81 inches at Long Branch on the 30th. General rainy periods were the 1st, 10th to 14th, 17th, 29th, 30th and 31st, and scattered occurrences on the 3d, 4th, 6th, 7th and 19th. The average number of days on which 0.01 inch or more rain fell was 8, which was 2 below normal.

WIND.

The prevailing wind direction was from the southwest, with an approximate velocity of 10 miles per hour, which was about normal. The highest velocity, sustained for 5 consecutive minutes, was 50 miles per hour from the northeast on the 31st.

SUNSHINE AND CLOUDINESS.

The average number of clear days throughout the State was 17, which was 5 more than normal; partly cloudy, 9, or 3 fewer than normal; cloudy, 5, or 2 fewer than normal. The approximate percent. of possible sunshine was 65, which was perhaps slightly more than normal.

MISCELLANEOUS.

Thunderstorms occurred on the 1st, 3d, 4th, 6th, 10th to 17th, 19th, 24th, 29th to 31st. Fog was reported on the 7th, 11th, 19th, 25th and 27th. Solar halos were observed on the 18th and 24th.

HAIL.

On the 6th in the vicinity of Paterson and Hackensack, hail, as large as five-eighths inch in diameter between 6:45 p. m. and 9 p. m., slightly damaged tomatoes and beans. On the 12th hail west of Flemington damaged corn and gardens. Pellets were the size of bantam eggs. In Leesburg 2 to 2:05 p. m., hail as large as three-fourths inch did \$4000 damage to tomatoes, lima beans and apples. On the 13th hailstones one-half inch in diameter at Indian Mills caused but little damage. On the 14th there was some damage from hail at Farmingdale.

COMPARATIVE DATA FOR JULY.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more prec.
1885.....	75.2	100	44	3.50	7.28	1.29	.....	.....	.....	.....
1886.....	73.0	98	48	4.91	7.95	2.98	.....	.....	.....	11
1887.....	77.1	102	54	7.67	15.29	1.95	.....	.....	.....	14
1888.....	71.1	95	45	3.50	7.03	1.25	.....	.....	.....	8
1889.....	73.4	95	48	10.19	18.58	4.66	.....	.....	13	9
1890.....	72.5	101	39	5.62	7.55	3.60	12	11	8	9
1891.....	70.1	95	43	5.30	9.41	3.03	10	11	10	12
1892.....	74.3	105	44	4.03	7.96	2.38	12	14	5	8
1893.....	73.9	102	40	2.72	4.63	1.26	14	13	4	8
1894.....	75.7	106	44	1.66	5.00	0.15	14	12	5	6
1895.....	70.9	99	41	4.26	7.73	1.53	12	12	7	10
1896.....	75.0	98	47	5.50	13.29	2.45	13	10	8	13
1897.....	74.1	102	50	11.42	20.80	6.11	10	11	10	15
1898.....	75.3	107	38	4.96	11.72	2.23	11	13	7	10
1899.....	74.7	98	38	5.75	9.62	3.34	13	11	7	11
1900.....	75.9	104	42	4.74	7.21	1.11	15	12	4	11
1901.....	77.3	107	45	5.87	10.92	1.89	9	13	9	14
1902.....	73.0	100	43	4.78	9.92	1.83	10	12	9	13
1903.....	73.3	100	38	5.51	10.14	3.08	16	10	5	12
1904.....	72.3	98	42	4.87	8.06	2.41	13	10	8	13
1905.....	74.4	102	42	4.06	8.19	1.67	12	13	6	12
1906.....	72.8	94	46	5.58	13.25	3.44	11	14	6	12
1907.....	73.6	96	40	2.62	6.42	0.95	8	12	11	8
1908.....	75.6	106	42	4.70	8.12	1.97	12	13	6	14
1909.....	71.6	99	36	2.12	4.03	1.03	14	14	3	5
1910.....	75.3	99	42	1.36	5.33	0.22	12	12	7	5
1911.....	76.0	104	42	3.64	6.46	2.06	12	12	7	9
1912.....	73.7	100	36	3.86	9.91	1.01	14	10	4	8
1913.....	74.4	100	41	2.52	4.72	1.50	20	9	2	15
1914.....	71.5	97	40	6.05	8.57	1.94	9	11	11	14
1915.....	72.8	98	44	5.31	11.06	2.23	10	13	8	11
1916.....	74.4	97	45	5.40	9.01	3.15	11	9	11	12
1917.....	74.2	104	46	4.83	7.93	2.38	10	11	10	12
1918.....	72.2	104	39	3.93	13.60	1.20	17	9	5	8

Climatological data for July, 1918.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.							Precipitation, in inches.				No. of days.				Prevailing direc- tion of wind.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation .01 in. or more.	Clear.	Pt. cloudy.	Cloudy.		
The Highlands and Kittatinny Valley.																				
Belvidere.....	Warren.....	289	27	71.4	-1.3	95	22	44	3	36	4.11	-1.49	2.34	0	7	24	2	5	Samuel J. Hixson. George S. Briggs. Brice E. Riker. William C. Harris.	
Charlotteburg.....	Passaic.....	719	26	67.4 ^b	-2.1	92	21	41	3†	39	2.82	-2.06	1.18	0	9	.....	.....	5		
Culvers Lake†.....	Sussex.....	848	17	.....	.....	.....	.....	40	3	.....	2.54	-2.22	0.85	0	10	21	9	1		
Dover.....	Morris.....	600	34	70.8	-0.6	97	72	44	3	34	1.81	-3.67	0.55	0	10	4	19	8		
Layton.....	Sussex.....	480	18	70.4 ^a	+0.2	96	22	39	3	41	3.16	-1.27	1.06	0	8	21	5	5	A. M. Depue. Irving G. Kern. D. Wilson Smith.	
Newton.....	Sussex.....	769	37	71.6 ^e	-0.3 ^c	95	22	.....	.....	.....	.....	.....	2.65	0	.....	.....	.....			
Phillipsburg.....	Warren.....	363	36	72.6	-1.4	96	23	46	3	36	5.28	+0.43	3.63	0	10	25	3	3		
Means and extremes.....				70.7	-0.9	97	22	39	3	41	3.29	-1.71	3.63	0	9	19	8	4	sw.	
The Red Sandstone Plain.																				
Bergen Point†.....	Hudson.....	37	21	72.6 ^c	-0.8	97 ^a	23	54	2	33	3.02	-2.49	2.30	0	5	7	22	2	William H. Mitchell. J. W. Demmers. Paul Molitor. L. B. Bonnett.	
Boonton.....	Morris.....	400	§28	70.8	.....	96	22	48	3	38	2.39	-3.07	1.46	0	10	27	3	1		
Chatham.....	Morris.....	330	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	.....	.....	.....			
Elizabeth.....	Union.....	45	39	73.2	-2.3	101	22	46	3	38	3.23	-2.03	2.25	0	10	17	8	6		
Flemington.....	Hunterdon.....	140	30	73.6	-0.3	99	21	46	3	39	2.04	-2.92	0.46	0	12	22	5	4	Hiram E. Deats. Charles J. Bates. S. K. Pearson, Jr. Thomas R. Hunt.	
Highwood.....	Bergen.....	90	29	70.6	-1.9	96	22	45	3	36	4.07	-1.30	2.71	0	9	10	16	5		
Jersey City.....	Hudson.....	10	19	74.8	+0.1	98	22	55	3	30	4.54	-0.24	3.49	0	9	14	10	7		
Lambertville.....	Hunterdon.....	80	31	71.2	-3.3	93	22	46	3	35	2.02	-3.02	0.91	0	7	13	12	6		
Little Falls.....	Passaic.....	180	§15	72.3		96	22	45	3	36	4.40	-1.19	2.00	0	8	15	7	9	Montclair Water Co. Prof. William Wiener. N. J. Experiment Station. George P. Kirsten.	
Newark†.....	Essex.....	159	76	73.8	-0.5	98	22	54	3	29	3.23	-1.50	2.04	0	9	19	6	6		
New Brunswick.....	Middlesex.....	110	65	73.2	-1.1	96	22	48	3	33	4.54	-0.51	3.18	0	7	20	9	2		
Palisades Park.....	Bergen.....	80	3	71.4	.....	98	22	45	3	36	4.67	.....	2.64	0	11	13	13	5		
Paterson.....	Passaic.....	80	47	73.7 ^b	-0.6	99	22	50	3	33	5.22	-0.11	3.10	0	11	2	3	26	Marion T. Probert. M. S. Taylor A. A. Macdonald. Dr. W. J. Chandler.	
Pompton Plains.....	Morris.....	195	16	.....	.....	.....	.....	.....	.....	.....	3.89	-1.66	1.87	0	10	.....	.....	.....		
Somerville.....	Somerset.....	60	36	72.0	-1.9	97	24	41	3	41	1.30	-3.83	0.86	0	5	17	10	4		
South Orange.....	Essex.....	200	48	72.6	-0.5	95	22	51	9	28	3.46	-1.66	1.61	0	11	15	7	9		
New York, N. Y.....		365	48	72.7	-0.8	94	22	56	3	25	3.61	-0.93	2.66	0	8	7	15	9	sw.	
Means and extremes.....				72.5	-1.2	101	22	41	3	41	3.47	-1.82	3.49	0	9	15	9	7	sw.	
The Southern Interior.																				
Bridgeton.....	Cumberland.....	30	37	75.0	-2.1	97	24	49	3	34	5.79	+1.36	4.45	0	7	21	3	7	Henry A. Jorden. D. S. B. McCoy. W. Rex B. Sutch. G. H. Parkhurst.	
Burlington.....	Burlington.....	12	§32	74.0	-1.3	96	22	49	3	32	4.05	-0.98	1.90	0	8	27	1	3		
Clayton.....	Gloucester.....	126	26	73.4	-2.6	97	21†	44	3	40	4.10	-0.17	2.21	0	11	19	9	3		
Hammonton.....	Atlantic.....	103	16	.....	.....	.....	.....	.....	.....	.....	3.91	-0.78	2.16	0	6	23	6	2		
Hightstown.....	Mercer.....	120	26											0					G. Franklin Eldridge. F. B. Jones. James M. Armstrong. R. W. Holman.	
Imlaystown†.....	Monmouth.....	185	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	.....	.....	.....	.....		
Indian Mills.....	Burlington.....	76	29	71.6	-3.5	98	22	42	3	42	7.44	+3.38	3.92	0	7	13	14	4		
Lakewood.....	Ocean.....	54	15	71.6	-1.3	96	22†	44	3	36	5.63	+0.60	4.22	0	7	15	9	7		
Moorestown.....	Burlington.....	75	56	73.4	-1.4	95	23	48	3	32	3.33	-1.25	2.73	0	8	19	10	2	Geo. L. Gillingham. William L. Flick. Lincoln Van Gilder. U. S. Weather Bureau.	
Northfield.....	Atlantic.....	25	11	.....	.....	.....	.....	.....	.....	.....	1.57	-2.36	1.17	0	4	.....	.....	.....		
Pleasantville.....	Atlantic.....	26	20	.....	.....	.....	.....	.....	.....	.....	1.86	-2.19	1.40	0	4	21	6	4		
Trenton.....	Mercer.....	190	47	73.2	-1.3	98	22	54	3	29	4.97	+0.20	2.91	0	9	10	14	7		
Tuckerton.....	Ocean.....	23	25	72.4	-1.7	98	22	43	3	38	2.42	-1.48	1.35	0	6	17	12	2	Frank R. Austin. H. C. Himes Baron de Hirsch Agr. Sch. U. S. Weather Bureau.	
Vineland.....	Cumberland.....	109	50	74.5	-1.9	97	21†	49	3	34	7.59	+3.08	6.36	0	8	21	6	4		
Woodbine.....	Cape May.....	43	27	71.1 ^a	-2.8	96	22	45	3	32	3.15	-0.87	2.80	0	4	26	2	3		
Philadelphia, Pa.....		117	48	75.4	-0.4	95	22	60	3	27	2.46	-1.87	1.21	0	9	9	15	7		
Means and extremes.....				73.0	-2.0	98	22	42	3	42	4.29	-0.11	6.36	0	6	19	8	4	sw.	
The Sea Coast.																				
Asbury Park.....	Monmouth.....	22	29								4.17	-1.08	2.01	0	8	16	8	7	Miss Dorothy A. Alexander. U. S. Weather Bureau. U. S. Weather Bureau. William D. Martin, Jr. U. S. Weather Bureau.	
Atlantic City.....	Atlantic.....	16	45	72.0	-0.5	85	23	55	3	23	1.84	-1.94	1.26	0	6	14	13	4		
Cape May City.....	Cape May.....	17	34	72.0	-1.4	86	23	56	3	18	1.20	-2.58	0.45	0	6	16	12	3		
Long Branch.....	Monmouth.....	25	11	69.9	-3.4	90	22	50	3	26	13.60	+8.70	6.81	0	10	9	17	5		
Sandy Hook.....	Monmouth.....	22	20	72.8	-1.1	96	22	59	3	25	4.93	-0.15	3.62	0	10	12	12	9	nw.	
Means and extremes.....				71.5	-1.6	96	22	50	3	26	5.15	+0.65	6.81	0	8	13	13	5	s.	
For the State.....				72.2	-1.4	101	22	39	3	42	3.93	-0.90	6.81	0	8	17	9	5	sw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

†† Received too late to be included in the means.

Reference letters, ^a, ^b, ^c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Imlaystown is Cream Ridge.

Daily precipitation for July, 1918.																																					
Stations.	Watersheed.	Day of month.																															Total.				
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31					
<i>The Highlands and Kittatinny Valley.</i>																																					
Belvidere.....	Delaware.....	.58										.37		*	.52																*	.30	2.34	4.11			
Charlotteburg.....	Passaic.....	.16			.05		T.					.37		.35	.19			.15		.37											*	.18	2.82				
Culvers Lake.....	Delaware.....	.55			.20		T.				.01	.11		.08	.85		T.	.06	T.	.01										T.	.30		2.54				
Dover.....	Passaic.....	.12			.13		.55					T.		.36	.14			.07		.08											.02	.30	1.81				
Layton.....	Delaware.....	.34			.19							.05		.71	.73			.08		T.					.04						T.	.10	3.16				
Newton.....	Delaware.....											.14	.02	.10	.17		.19	*	.17												T.	*	2.65				
Phillipsburg.....	do.....	.40		T.			.22				.31	.21		.11	.04			.15		.04							T.					.17	3.63	5.28			
Sussex.....	Hudson.....																																				
<i>The Red Sandstone Plain.</i>																																					
Bergen Point.....	Coast.....	.36						.06			T.	T.	T.	T.	.30			T.													T.	.80	1.50	3.02			
Boonton|||.....	Passaic.....		.12		.07			.10					.02	.03	.03	.36			.07												T.	.30	2.39				
Chatham|||.....	do.....																																				
Elizabeth.....	Coast.....	.31			T.			.09			.07		.04	.05	.31			*	.11												T.	*	2.25	3.23			
Flemington.....	Raritan.....	.02				T.		.02			.11	T.	.02	.46	.24			.04	.03						.08						.18	.44	.40	2.04			
Highwood.....	Hackensack.....	.20			T.			.03	.44			.03	.26		.1	.37		.03		T.													1.41	1.30	4.07		
Jersey City**.....	Coast.....	.43		T.			.01				.05	.27		.02	.17			.10									T.						.91	2.58	4.54		
Lambertville.....	Delaware.....	.11		T.			.25				T.			.91	.08			*	.37												T.	.30	T.	2.02			
Little Falls**.....	Passaic.....	.21		T.			T.						.11	.01	.25			.10		1.25											T.	2.00	.47	4.40			
Newark**.....	Coast.....	.36		.05			.14			T.	.05		T.	.04	.38			.07		T.												T.	2.04	.10	3.23		
New Brunswick.....	Raritan.....	.20			T.							T.	.56		.02			.04	.50								T.				T.	.04	3.18	4.54			
Palisades Park.....	Hackensack.....	.18				.92	.01				.02	.03		.08	.48			.06		.23							T.						.26	4.67			
Patererson.....	Passaic.....	.17			.02		.42				T.		T.	.02	.12			.08		.77												.15	2.20	.90	5.22		
Plainfield**.....	Raritan.....																																				
Pompton Plains|||.....	Passaic.....		.33		.11		T.	.39					.07	.14	.24	.55			.13			.06															
Somerville.....	Raritan.....	.09			T.						T.	.22		.01				.12	T.	T.												T.	1.87	3.89			
South Orange.....	Rahway.....	.53			.02		.11				.01		.32	.16	.18			.08		T.		T.											.86	1.30			
New York, N. Y***.....	Coast.....	.37					.01				T.	.14		.17	.10			.06														.10	1.61	.34	3.46		
<i>The Southern Interior.</i>																																					
Bridgeton.....	Coast.....													.36			.20		.22		.05										.18	.24	4.54	5.79			
Burlington.....	Delaware.....	T.			.12								.09	.23	*		.46																.18	1.90	1.22	4.05	
Clayton.....	Maurice.....	.03			.03		T.					.04	.14	.37		.09	.21		.21		.01			T.								.05	.92	2.21	4.10		
Hammonton.....	Mullica.....	.45					T.							.08		.10		.20																			
Hightstown.....	Raritan.....																																				
<i>The Sea Coast.</i>																																					
Imlaystown.....	Delaware.....																																				
Indian Mills.....	Mullica.....	.14										.09		.92	.10			.27																			
Lakewood.....	Metedeconk.....	.34					T.	.13				.24	.02		.40			.28															2.00	3.92	7.44		
Moorestown.....	Delaware.....	T.			.05							.05		.13	.10			.03															.05	1.59	1.35	3.33	
Northfield.....	Coast.....															T.		.29		.03	.08													.11	1.57		
Pleasantville.....	Coast.....	.08					T.							.15	T.		T.	.34		.04																	
Trenton***.....	Delaware.....	.07		.02	T.		.81				T.	.42		.02	.51			.52		.05													T.	2.89	.04	4.97	
Tuckerton.....	Coast.....	.23									T.	.05		.02	.51			.26																T.	1.35	2.42	
Vineland.....	Maurice.....	.12					.01					.01	T.	.81		.08		.19			.01													T.	6.36	7.59	
Woodbine.....	Coast.....			.02													.30		.30		.03														2.80	3.15	
Philadelphia, Pa.....	Delaware.....	T.		.05	T.					T.	T.	T.	.03	.07	.09			.05		.81										T.	T.	.02	1.05	.29	2.46		
<i>The Sea Coast.</i>																																					
Asbury Park.....	Coast.....	.20						.41				.13	.06		.37			.23															*	.76	2.01	4.17	
Atlantic City***.....	do.....	.09					T.							T.	.01			.45		.02														.03	1.24	1.84	
Cape May City.....	do.....	T.				T.								.45	.21	T.		.06		.02														.03	.43	1.20	
Long Branch**.....	do.....	.09			T.			1.76	.02			.19	.70	.03	.17			.76																	6.81	3.07	13.60
Sandy Hook***.....	do.....	.11					.07					.11	.05		.04	.11		.29																.42	2.59	1.14	4.93

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded.
|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.
* Precipitation included in the next following measurement. **Precipitation for 24-hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

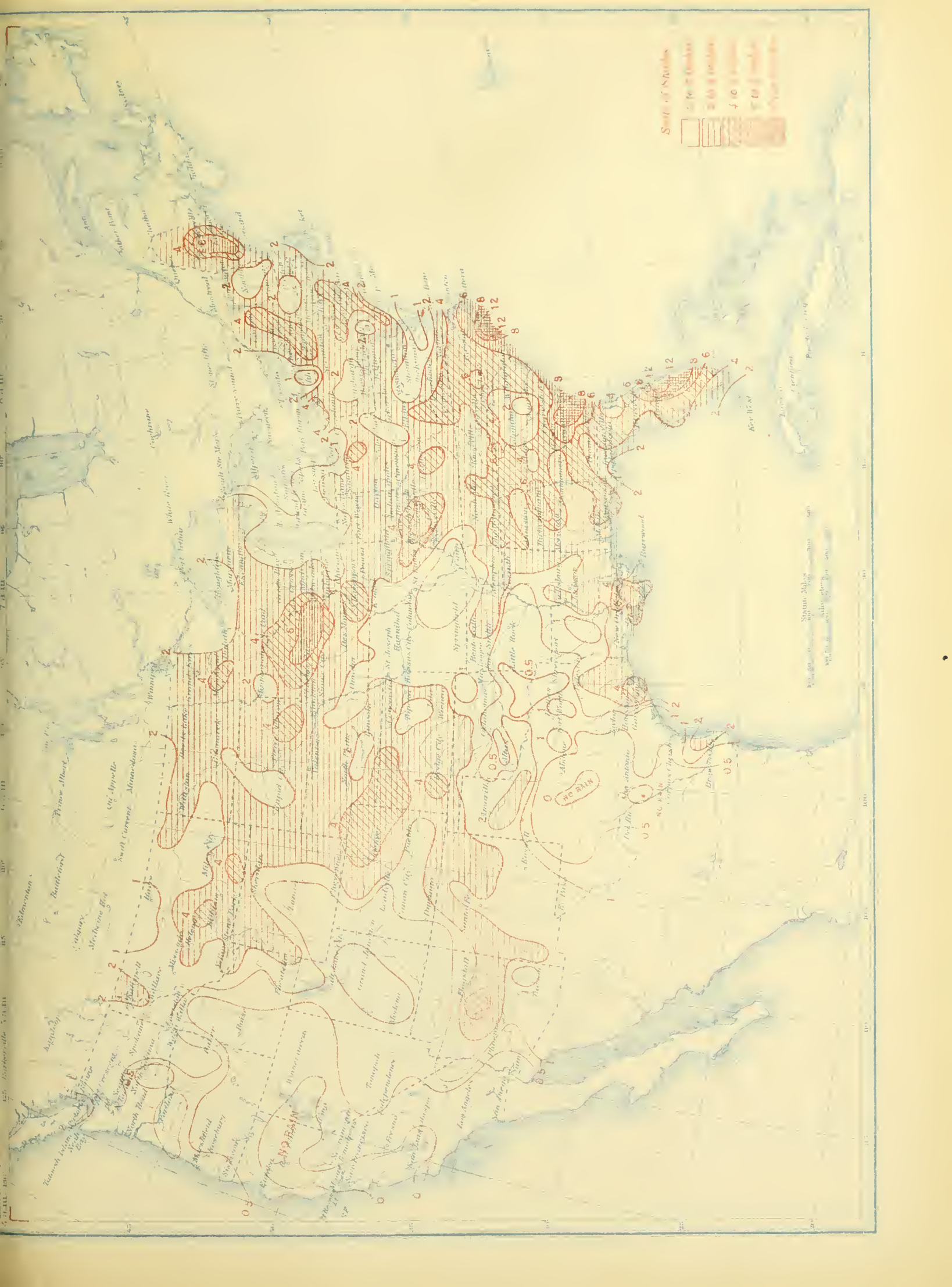
MISCELLANEOUS DATA.												
Stations.	Pressure.					Wind.				Moisture.		Sun- shine
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	Percentage of possible sunshine.
							Miles per hour.	Direction.	Date.			
Atlantic City.....	30.00	30.23	26	29.79	17	6	23	ne.	31	75	81	69
Cape May City.....	30.03	30.25	22	29.83	17	7	27	nw.	2			
Long Branch.....	29.98	30.24	26	29.76	13	13	50	ne.	31	73	80	67
Newark.....										66*	68†	67
New York, N. Y.....	29.98	30.25	26	29.75	9	13	48	nw.	14	70	64	70
Palisades Park.....	29.98	30.30	26	29.75	9							
Philadelphia, Pa.....	29.99	30.25	26	29.76	17	9	27	nw.	2	69	62	65
Sandy Hook.....	29.99	30.26	26	29.75	9	12	47	nw.	14	77	78	52
Wentworth, N. H.....	29.98	30.24	26	29.75	9	9	37	s.	29	73	65	68

§ Two directions and dates

° 7 a. m. † 9 p. m.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.	
<i>The Highlands and Kittatinny Valley.</i>																																	
Belvidere.....	Maximum...	78	72	80	83	85	86	80	73	76	79	79	82	78	80	86	89	81	84	86	87	91	95	92	93	81	89	89	91	84	83	72	83.4
	Minimum...	55	53	44	56	53	61	62	53	49	55	54	54	60	55	56	60	64	61	60	59	59	63	64	66	65	67	67	66	69	67	61	59.3
Charlotteburg.....	Maximum...	78	66	80	77	84	77	69	67	68	78	76	81	80	78	80	78	77	78	80	83	92	89	88	88	85	89	88	83	83	71	79.6	
	Minimum...	59	51	41	52	49	53	57	54	41	56	48	51	57	53	50	50	52	55	57	58	54	57	58	56	64	65	60	61	65	66	59	55.3
Dover.....	Maximum...	77	68	81	80	88	86	79	73	71	79	81	81	81	76	81	86	90	75	85	85	88	93	97	94	91	75	86	90	67	88	74	83.2
	Minimum...	59	53	44	55	54	53	59	53	48	55	53	53	58	55	55	57	60	56	57	58	56	63	63	61	90	80	88	89	91	88	78	75
Layton.....	Maximum...	81	71	80	80	87	84	75	71	73	80	81	85	81	80	87	80	87	78	86	82	82	92	95	92	90	83	86	89	90	87	80	82.2
	Minimum...	64	57	39	55	49	61	52	48	55	50	53	56	55	52	52	60	56	57	58	56	60	61	63	64	66	66	89	90	87	80	70	81.5
Newton.....	Maximum...	80	73	82	82	83	87	77	72	73	80	83	83	76	80	89	92	76	86	86	90	95	95	96	95	85	91	93	94	90	96	71	84.5
	Minimum...	62	55	46	57	55	62	60	54	49	56	55	55	61	57	57	60	65	61	65	61	60	65	65	68	67	69	66	71	67	62	60	60.5
Phillipsburg.....	Maximum...	80	73	82	82	83	87	77	72	73	80	83	83	76	80	89	92	76	86	86	90	95	95	96	95	85	91	93	94	90	96	71	84.5
	Minimum...	62	55	46	57	55	62	60	54	49	56	55	55	61	57	57	60	65	61	65	61	60	65	65	68	67	69	66	71	67	62	60	60.5
Sussex.....	Maximum...	80	73	82	82	83	87	77	72	73	80	83	83	76	80	89	92	76	86	86	90	95	95	96	95	85	91	93	94	90	96	71	84.5
	Minimum...	62	55	46	57	55	62	60	54	49	56	55	55	61	57	57	60	65	61	65	61	60	65	65	68	67	69	66	71	67	62	60	60.5
<i>The Red Sandstone Plain.</i>																																	
Bergen Point.....	Maximum...	62	69	79	82	86	76	78	75	75	81	83	81	72	81	87	88	75	86	82	89	95	95	97	87	77	80	88	91	92	88	71	82.4
	Minimum...	42	54	59	59	59	61	62	58	58	58	56	56	63	56	56	68	63	63	62													

§§ Instruments are read in the morning; the maximum temperature then read is charge



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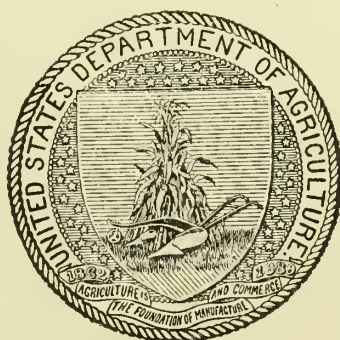
U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU
CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

AUGUST, 1918.

BY
G. HAROLD NOYES
METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
SEPTEMBER 19, 1918.

Departure of the Mean Temperature from the Normal, August, 1918.



Shaded portions show excess (+).
Unshaded portions show deficiency (-).
Lines show amount of excess or deficiency.

Scale Miles
0 100 200 300 400 500 600 700 800 900 1000
Kilometers
0 100 200 300 400 500 600 700 800 900 1000

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

Vol. XXIII. TRENTON, N. J., AUGUST, 1918. No. 8.

GENERAL SUMMARY.

The weather during August was remarkable in several essential features; the highest temperatures ever known in New Jersey occurred on the 7th when the thermometer rose well above 100° in practically every portion of the State, two stations reporting 108°; and the average rainfall has been less only in August 1916 and 1896. Sunshine was greater than usual, and, coupled with the dry heat, contributed toward fine outdoor weather, favorable for life and labor in the open, and excellent harvest conditions, but it also undeniably was a marked hindrance to good crop growth, and some staples such as corn and potatoes were seriously affected. The weather was pleasantly bright and cool from the 1st to the 4th, and from the 17th to the 21st, but at other times the heat was above normal. Oppressiveness from great humidity was a feature from the 6th to the 12th; about sunset of the 6th in Trenton the vapor pressure was 1.127 inches, which is a very unusually high record. The Delaware River averaged a lower stage for August than ever before recorded, which was a further evidence of the lack of ground waters. A shower on the 31st of August occurred after the observation for the day had been recorded at most of the stations; where this has been the case, the amount of rain will be recorded on the 1st day of September.

The mean stage of the Delaware River at Phillipsburg was 0.6 foot, and the water fell steadily from the 1st to the 24th, when it remained nearly without change. At Trenton, the mean daily stage was 0.3 foot, which was 0.7 foot below normal; the water fell steadily from the 1st to the close of the month.

The temperature departure from the normal, for the year 1918, to date, by sections, is: The Highlands, -0.3; Red Sandstone Plain, -0.2; Southern Interior, -0.2; Seacoast, -1.1. The precipitation accumulated departure from the normal, for the year 1918, to date, by sections, is: The Highlands, -4.59; Red Sandstone Plain, -7.34; Southern Interior, -4.77; Seacoast, -6.25.

Storm warnings were displayed on the 25th.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 34 stations, was 74.4°, which was 2.6° above normal. The highest temperature was 108° at Flemington and Somerville on the 7th, and the lowest, 40° at Charlotteburg on the 20th. The highest monthly mean temperature was 77.6° at Woodbine, and the lowest mean was 69.0° at Long Branch. The greatest daily range of temperature was 42° at Charlotteburg on the 20th.

PRECIPITATION.

The average total monthly rainfall, as deduced from observations of 38 stations, was 1.85 inches, which was 3.06 inches below normal. The greatest monthly amount of rain was 4.25 inches at Moorestown, and the least, 0.34 inch at Clayton. The greatest amount of rain in 24 consecutive hours was 1.77 inches at Moorestown on the 12th. Monthly deficiencies of rain ranged to greater than 5 inches. The average number of days on which 0.01 inch or more rain fell was 7, which was 3 below normal.

WIND.

The prevailing wind direction for the month was from the southwest, with an approximate velocity of 10 miles per hour, which was slightly above normal. The highest velocity, sustained for 5 consecutive minutes, was 48 miles per hour from the west on the 8th, at Long Branch.

SUNSHINE AND CLOUDINESS.

The average number of clear days, throughout the State was 18, which was 5 more than normal; partly cloudy, 7, which was 4 below normal; cloudy, 6, which was 1 below normal. The approximate percent of possible sunshine was 69, which was somewhat more than normal.

MISCELLANEOUS.

Thunderstorms occurred as follows in some portions of the State: 1st, 2d, 4th to 8th, 10th to 14th, 25th, 26th, 27th, 29th, 31st. Fog was observed on the 3d, 7th, 11th, 12th, 13th, 15th, 22d to 26th, 31st. The aurora was observed at Layton on the 16th. Hail was reported at Bridgeton, 7th; Boonton 10th; Culvers Lake 12th, 14th; South Orange 29th; Palisades Park 31st. On the 7th a storm with high wind and hail in some places over southwestern parts of Cumberland county knocked off the bloom and small fruit of some kinds of vegetables and fruits and broke down corn.

ERRATA.

May, 1918.—Clayton: precipitation on the 28th, and greatest in 24 hours, 2.56, should read 3.00; total for the month, 6.14, should read 6.58; and departure, +2.88, should read +3.32.

June, 1918.—Culvers Lake: lowest temperature, 34°, should read 33°. Layton: total precipitation, 3.94, should read 3.49.

July, 1918.—Dover: date of lowest temperature, 72, should read 22. Somerville: date of lowest temperature, 24, should read 23. Long Branch: mean temperature, 69.9, should read 69.2. Sandy Hook: number of cloudy days, 9, should read 7. Miscellaneous data on page 53—Trenton: highest wind, 37, south, 29th, should read 39, north, 19th.

COMPARATIVE DATA FOR AUGUST.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more prec.
1885.....	71.7	95	40	6.11	10.09	3.47	.....	.....	.....	.....
1886.....	69.5	96	42	2.81	5.36	1.10	.....	.....	.....	.....
1887.....	70.4	94	42	3.76	7.34	2.09	.....	.....	.....	8
1888.....	72.5	98	41	6.13	10.53	2.55	.....	.....	.....	9
1889.....	69.6	91	45	5.13	9.06	1.93	.....	.....	.....	10
1890.....	71.5	99	40	4.90	7.51	2.89	8	15	8	11
1891.....	72.8	100	46	5.32	8.89	2.58	8	11	12	13
1892.....	73.4	99	46	3.63	5.65	0.72	12	13	6	9
1893.....	72.8	98	38	6.52	11.94	3.55	14	11	6	8
1894.....	70.9	97	44	2.58	9.28	0.15	13	12	6	7
1895.....	74.2	102	34	2.53	5.06	0.02	16	12	3	7
1896.....	73.6	105	39	1.83	3.27	0.50	17	10	4	7
1897.....	71.0	91	41	4.39	8.69	2.07	14	12	5	9
1898.....	74.8	98	42	5.36	9.28	2.70	12	12	7	10
1899.....	72.3	99	39	4.36	9.70	2.16	10	12	9	9
1900.....	76.3	104	41	2.68	4.56	0.70	15	11	5	10
1901.....	73.8	98	44	9.43	15.80	4.88	12	10	9	11
1902.....	70.1	93	40	3.91	10.67	1.31	15	13	3	9
1903.....	68.4	98	39	6.95	14.54	4.30	10	10	11	13
1904.....	70.8	92	37	6.62	13.01	2.65	15	10	6	9
1905.....	71.1	95	38	5.72	9.88	3.51	13	10	8	12
1906.....	74.6	97	42	5.95	17.91	2.21	10	11	10	13
1907.....	70.5	96	39	3.45	7.61	1.79	14	12	5	10
1908.....	70.6	103	36	5.05	9.23	2.43	11	10	10	10
1909.....	70.2	100	34	4.59	12.94	1.41	14	9	8	6
1910.....	70.4	92	36	3.78	8.46	1.76	9	10	12	10
1911.....	72.1	101	39	8.91	14.74	5.31	10	11	10	11
1912.....	70.0	95	35	3.42	7.62	1.19	12	13	6	10
1913.....	71.7	100	38	4.06	10.21	1.93	18	9	4	10
1914.....	73.3	98	42	3.15	6.53	1.04	13	12	6	9
1915.....	70.9	98	41	7.73	10.92	4.02	11	11	9	13
1916.....	73.2	100	40	1.34	4.15	0.27	20	7	4	6
1917.....	74.0	103	41	2.21	5.68	0.86	18	9	4	8
1918.....	74.4	108	40	1.85	3.55	0.34	18	7	6	7

Climatological data for August, 1918.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.							Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation of in. or more.	Clear.	Pt. cloudy.	Cloudy.		
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	27	72.9	+2.1	98	7	50	20	31	0.61	-4.35	0.28	0	4	27	0	4		Samuel J. Hixson. George S. Briggs. Brice E. Riker. William C. Harris.
Charlotteburg.....	Passaic.....	719	26	70.4 ^a	+2.7	98	7	40	20	42	2.26	-2.49	0.95	0	9	23	5	3	sw.	
Culvers Lake††.....	Sussex.....	848	17	.....	.....	.....	.....	42	18	.....	2.32	-2.21	0.79	0	11	22	5	4	c.	
Dover.....	Morris.....	600	34	72.4	+3.2	100	7	47	20	35	.....	.....	0.68	0	....	8	16	7	.....	
Layton.....	Sussex.....	480	18	72.4	+4.0	102	7	43	20	40	3.55	-0.09	0.74	0	8	23	1	7	w.	A. M. Depue. Irving G. Kern. D. Wilson Smith.
Newton.....	Sussex.....	769	37	73.0	+3.2	100	7	50	18†	30	1.64	-2.77	0.87	0	8	17	4	10	sw.	
Phillipsburg.....	Warren.....	363	36	74.8	+3.1	104	7	51	20	33	1.68	-3.92	1.20	0	9	21	4	6	sw.	
Means and extremes...				72.6	+3.0	104	7	40	20	42	2.01	-2.49	1.20	0	8	20	5	6	sw.	
<i>The Red Sandstone Plain.</i>																				
Bergen Point††.....	Hudson.....	37	21	74.6 ^c	+2.9	104	7	55	21	32				0					s.	William H. Mitchell. J. W. Demmers. Paul Molitor. L. B. Bonnett.
Boonton.....	Morris.....	400	28	72.6	.....	103	7	48	19†	37	1.65	-3.74	1.09	0	8	25	2	4	sw.	
Chatham.....	Morris.....	330	16	.....	.....	.....	.....	.....	.....	.....	1.77	-3.15	0.83	0	7	21	7	3	.....	
Elizabeth.....	Union.....	45	39	75.0	+1.5	108	7	49	20	36	1.71	-2.83	0.95	0	7	18	8	4	sw.	
Flemington.....	Hunterdon.....	140	30	76.0	+4.2	108	7	49	20	38	0.91	-3.50	0.61	0	3	23	4	4	sw.	Hiram E. Deats. Charles J. Bates. S. K. Pearson, Jr. Thomas R. Hunt.
Highwood.....	Bergen.....	90	29	72.6	+1.4	103	7	48	20	32	1.66	-3.41	0.69	0	7	13	10	8	se.	
Jersey City.....	Hudson.....	10	19	77.2	+3.9	106	7	58	20	32	2.38	-2.27	0.91	0	8	10	16	5	sw.	
Lambertville.....	Hunterdon.....	80	31	74.1 ^f	+1.7	105	7	.....	.....	.....	1.64	-3.12	1.12	0	4	.....	.....	.....	s.	
Little Falls.....	Passaic.....	180	15	74.1 ^a		103	7	48	20	34	2.52	-2.54	1.55	0	9	21	6	4	w.	Montclair Water Co. Prof. William Wiener. N. J. Experiment Station. George P. Kirsten.
Newark††.....	Essex.....	159	76	76.0	+3.4	105	7	57	18	31	1.94	-2.30	0.99	0	8	21	3	7	ne.	
New Brunswick.....	Middlesex.....	110	65	75.0	+2.6	106	7	51	20	30	2.55	-2.54	1.04	0	6	22	4	5	sw.	
Palisades Park.....	Bergen.....	80	3	73.0	.....	103	7	49	20	34	3.41	.....	1.13	0	10	9	14	8	s.	
Paterson.....	Passaic.....	80	47	75.6 ^a	+3.6	104	7	52	20	32	1.10	-4.03	0.25	0	8	6	6	19	sw.	Marion T. Probert. M. S. Taylor A. A. Macdonald. Dr. W. J. Chandler.
Pompton Plains.....	Morris.....	195	16	.....	.....	.....	.....	.....	.....	.....	1.60	-3.48	0.69	0	9	.....	.....	.....	.....	
Somerville.....	Somerset.....	60	36	75.0	+3.1	108	7	47	20	38	1.87	-2.84	1.17	0	6	19	8	4	sw.	
South Orange.....	Essex.....	200	48	73.9	+2.2	101	7	54	20	26	2.82	-2.57	0.93	0	9	23	0	8	w.	
New York, N. Y.....		365	48	74.8	+2.6	102	7	60	20	24	1.70	-2.83	0.63	0	8	9	14	0	sw.	U. S. Weather Bureau.
Means and extremes...				74.6	+2.9	108	2	47	20	38	2.04	-3.03	1.55	0	7	18	7	6	sw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	37	76.4 ^c	+1.3	104	7	52	20	28	3.29	-1.45	1.42	0	9	21	2	8	ne.	Henry A. Jorden. D. S. B. McCoy. W. Rex B. Sutch. G. H. Parkhurst.
Burlington.....	Burlington.....	12	32	76.2	+2.8	103	7	53	20	30	1.63	-3.98	0.60	0	7	26	1	4	nw.	
Clayton.....	Gloucester.....	126	26	75.8	+2.3	105	7	47	20	36	0.34	-4.81	0.23	0	3	23	6	2	sw.	
Hammonton.....	Atlantic.....	103	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Hightstown.....	Mercer.....	120	26																	G. Franklin Eldridge. F. B. Jones. James M. Armstrong. R. W. Holman.
Imlaystown††.....	Monmouth.....	185	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Indian Mills.....	Burlington.....	76	29	74.2	+1.1	105	7	44	20	39	2.87	-2.30	1.76	0	5	15	12	4	sw.	
Lakewood.....	Ocean.....	54	15	73.6	+2.9	101	7	45	19	32	1.41	-3.66	0.95	0	5	17	8	6	sw.	
Moorestown.....	Burlington.....	75	56	74.7	+2.2	102	7	52	20	27	4.25	-0.49	1.77	0	8	18	12	1	se.	Geo. L. Gillingham. William L. Flick. Lincoln Van Gilder. U. S. Weather Bureau.
Northfield.....	Atlantic.....	25	11	.....	.....	.....	.....	.....	.....	.....	1.28	-3.47	0.65	0	4	.....	.....	.....	.....	
Pleasantville.....	Atlantic.....	26	20	.....	.....	.....	.....	.....	.....	.....	1.48	-3.21	0.95	0	5	27	3	1	.....	
Trenton.....	Mercer.....	190	47	75.4	+2.4	105	7	55	20	26	2.52	-2.85	1.21	0	9	9	13	9	sw.	
Tuckerton.....	Ocean.....	23	25	75.6	+3.4	105	7	44	20	39	0.47	-5.31	0.33	0	2	18	11	2	sw.	Frank R. Austin. H. C. Himes Baron de Hirsch Agr. Sch. U. S. Weather Bureau.
Vineland.....	Cumberland.....	109	50	76.5 ^d	+2.9	.....	.....	52	19†	30	0.94	-4.03	0.64	0	4	.....	.....	.....	.....	
Woodbine.....	Cape May.....	43	27	77.6 ^e	+5.4	103	7	.....	.....	.....	1.88	-2.42	1.00	0	6	22	4	5	sw.	
Philadelphia, Pa.....	.....	117	48	77.6	+3.8	106	7	62	20	24	3.35	-1.26	1.60	0	9	0	13	9	sw.	
Means and extremes...				75.6	+2.7	105	7	44	20	39	1.89	-3.11	1.77	0	5	20	7	4	sw.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	29																	Miss Dorothy A. Alexander. U. S. Weather Bureau. U. S. Weather Bureau. William D. Martin, Jr. U. S. Weather Bureau.
Atlantic City.....	Atlantic.....	16	45	74.8	+2.2	104	7	57	20	24	1.38	-2.92	0.50	0	5	12	14	5	sw.	
Cape May City.....	Cape May.....	17	34	75.0	+1.6	100	7	54	20	26	0.48	-3.78	0.20	0	9	13	13	5	s.	
Long Branch.....	Monmouth.....	25	11	69.0	-2.4	97	7	47	20	25	0.53	-4.57	0.30	0	4	10	15	6	se.	
Sandy Hook.....	Monmouth.....	22	20	75.0	+2.3	98	7	62	20	22	0.66	-4.19	0.35	0	7	18	7	6	sw.	
Means and extremes...				73.4	+0.9	104	7	47	20	26	0.76	-3.86	0.50	0	6	13	12	6	sw.	
For the State.....				74.4	+2.6	108	7	40	20	42	1.85	-3.66	1.77	0	7	18	7	6	sw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

†† Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Imlaystown is Cream Ridge.

Daily precipitation for August, 1918.

Stations.	Watershed.	Day of month.																															Total.	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>The Highlands and Kittatinny Valley.</i>																																		
Belvidere.....	Delaware.....				*	.24					*	.09	*		*											.28				*			0.61	
Charlotteburg.....	Passaic.....				.15	.05			.37		.10		.05	.10	.20														.34	*		2.32		
Culvers Lake.....	Delaware.....				.72	.07			.20		.03	.25	.66		.02	.09					.03			T.					.24		.01	*		
Dover.....	Passaic.....				*	.28			.01		*	.20	.68																.15			§		
Layton.....	Delaware.....				.64	.04			.44		.48	.11	.74		.39														.71			3.55		
Newton.....	Delaware.....			.03	.30	.03			.19		T.	.12	.87		.02															.08		1.64		
Phillipsburg.....	do.....				.02	.02					T.	.03	.01	.19	.11									T.			.02			.08		1.20		
Sussex.....	Hudson.....																															1.68		
<i>The Red Sandstone Plain.</i>																																		
Bergen Point.....	Coast.....	.07									T.	.60	.60		T.																	§		
Boonton|||.....	Passaic.....	.04				.15	T.		.01			.11	.01	1.09		.11												T.	T.	.13	T.	1.65		
Chatham||.....	do.....	.07	.16			.11						.83		.49		.02														.09		1.77		
Elizabeth.....	Coast.....	.05			.02	.10				T.		.95	.48		T.															.09		1.71		
Flemington.....	Raritan.....	.03			T.					T.		.61	.27		T.											T.					T.	.02	0.91	
Highwood.....	Hackensack.....				.10	.18			.01		T.	.21	.69		.02	T.														.45		1.66		
Jersey City**.....	Coast.....				.01	.32		T.	T.			.17	.74	.37		.03														.40		.34	2.38	
Lambertville.....	Delaware.....				T.				T.		T.	.16	1.12		.15															.21		1.64		
Little Falls**.....	Passaic.....	T.			.10	T.			.02		T.	.03	.65		.03									.05						.05		1.55		
Newark**.....	Coast.....		T.		.02	T.			T.		.22	.64	.50		.09									.03			T.			.99		.45	2.94	
New Brunswick.....	Raritan.....			T.					.47	T.	T.	.69	1.04	T.		.31				T.										.02		T.	2.55	
Palisades Park.....	Hackensack.....				.08	.12			.18	T.	.42	*	.44		.30									.02							1.13	.72	3.41	
Paterson.....	Passaic.....	T.			.05	T.			.22			.23	.25			.02								T.							.07	.03	.23	1.10
Plainfield**.....	Raritan.....																																	
Pompton Plains||.....	Passaic.....					.19			.38			.13		.69	.02	.07													.02		.03	.07	1.66	
Somerville.....	Raritan.....	.05							T.			.44	1.17		.04									.11							.06		1.87	
South Orange.....	Rahway.....		.06		.06	.06					*	.93	.70		.33															.68		.20	2.82	
New York, N. Y.***.....	Coast.....			T.	.01	.18			T.			.12	.51	.35		.01											T.				.22		.30	1.70
<i>The Southern Interior.</i>																																		
Bridgeton.....	Coast.....				T.			*	1.42		.15			.54		.38				.02									.06		.05	.67	3.29	
Burlington.....	Delaware.....	.06			T.		.11					.22	.48		.60												T.			*	.16		1.63	
Clayton.....	Maurice.....	.06				T.							T.		.23	T.	T.		T.	T.										.05			0.34	
Hammonton.....	Mullica.....								T.					.90		.83																.47		2.20
Hightstown.....	Raritan.....																																	
Imlaystown.....	Delaware.....												.04	1.76		.42																		
Indian Mills.....	Mullica.....												.15	.95		.04															.60		2.87	
Lakewood.....	Metedeconk.....	.12												.04																	.15		T.	1.41
Moorestown.....	Delaware.....	.03				.05						.07	1.77		.44										T.						.80		4.25	
Northfield.....	Coast.....	.32												.29		.02											.57	.52			.65	T.	1.28	
Pleasantville.....	Coast.....	.08											.95			.04															.39	.02	1.48	
Trenton***.....	Delaware.....	.01			T.				.08	T.	.35	.06	1.21		.06									.08				T.			.03		.64	2.52
Tuckerton.....	Coast.....												.33																		.14		0.47	
Vineland.....	Maurice.....								.05				.20		.64																T.	.05	0.94	
Woodbine.....	Coast.....	1.00							.05			.01		.75	.06													.01					1.88	
Philadelphia, Pa..	Delaware.....				T.	.13			T.	T.	.03	.03	1.60		.43									.01			T.	.16			.20		.76	3.35
<i>The Sea Coast.</i>																																		
Asbury Park.....	Coast.....								T.					.43		.03															.42		.49	1.38
Atlantic City***.....	do.....	.01							T.																									0.48
Cape May City.....	do.....	.02							T.			.02		.03	.02	.16	.04														.15	.02		0.53
Long Branch**.....	do.....							.01	T.	T.		.19	.03																			.30	0.53	
Sandy Hook***.....	do.....				T.							.05	.19	.04		.01												T.	.01		.01		.35	0.66

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded.
|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.
* Precipitation included in the next following measurement. **Precipitation for 24-hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.				Moisture.		Sun-
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	Percentage of possible sunshine.
							Miles per hour.	Direction.	Date.			
Atlantic City.....	30.05	30.43	20	29.77	9	7	25	w.	7	79	80	68
Cape May City.....	30.45	30.45	20	29.86	9	8	30	w.				
Long Branch.....	30.05	30.43	20	29.74	9	14	48	w.	8	76	81	70
Newark.....										71*	68†	70
New York, N. Y.....	30.04	30.44	19	29.72	9	14	54	nw.	14	73	69	71
Palisades Park.....	30.04	30.45	19	29.70	9							
Philadelphia, Pa.....	30.04	30.45	19	29.77	9	8	30	nw.	13	74	70	65
Sandy Hook.....	30.04	30.46	19	29.72	9	12	45	nw.	14	77	75	66
Trenton.....	30.04	30.45	19	29.75	5	9	37	w.	8	79	71	71

§ Two directions and dates. * 7 a. m. † 9 p. m.

Daily temperatures for August, 1918.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.		
<i>The Highlands and Kittatinny Valley</i>																																		
Belvidere.....	Maximum...	81	84	80	71	91	95	98	92	87	80	77	83	93	93	84	84	78	76	74	81	83	88	88	88	86	82	85	82	85	83	84	84.4	
	Minimum...	54	56	54	55	66	72	72	72	73	67	65	66	66	65	59	53	60	53	54	50	52	63	62	62	71	60	53	67	55	54	61.4 ^a		
Charlotteburg.....	Maximum...	80	84	83	78	92	93	98	97	86	85	68	74	92	82	81	81	73	76	82	81	90	87	88	84	84	82	82	83	84	80	83.7 ^b		
	Minimum...	49	51	62	49	62	66	69	70	64	64	60	66	63	68	49	59	45	43	40	44	55	56	63	63	67	57	63	62	54	57	57.1 ^b		
Dover.....	Maximum...	83	85	79	70	92	96	100	94	89	73	69	82	92	94	83	84	77	74	74	81	86	91	92	89	82	81	83	76	83	82	79	83.7	
	Minimum...	52	57	57	54	64	72	74	75	73	63	61	68	66	69	60	53	56	52	49	47	51	62	63	65	68	70	61	50	65	55	61.0		
Layton.....	Maximum...	82	85	79	68	96	98	102	92	89	81	75	85	93	94	84	85	80	77	78	83	83	92	92	89	88	85	85	79	83	84	80	85.4	
	Minimum...	49	51	61	52	61	69	68	79	70	64	63	68	68	66	58	51	58	46	46	43	58	58	58	69	61	69	55	47	65	53	55	59.3	
Newton.....	Maximum...	78	82	79	74	90	95	100	96	88	82	72	89	91	91	80	81	74	73	80	84	89	90	88	84	83	81	78	84	87	85	83.9		
	Minimum...	58	60	61	54	68	73	78	71	72	65	62	66	66	66	60	54	58	50	50	50	56	66	68	66	67	70	60	53	64	58	60	62.2	
Phillipsburg.....	Maximum...	83	88	81	75	95	101	104	96	88	75	79	85	97	95	85	81	80	80	80	84	85	92	94	92	86	84	87	82	86	85	88	87.0	
	Minimum...	53	57	59	56	66	73	75	73	66	65	69	68	66	61	55	61	54	55	51	54	61	64	66	67	70	62	54	66	59	62	62.6		
Sussex.....	Maximum...																																	
	Minimum...																																	
<i>The Red Sandstone Plain.</i>																																		
Bergen Point.....	Maximum...	82	87	79	82	95	104	95	92	79	72	66	63	68	68	85	86	80	75	75	81	86	89	93	89	88	82	83	78	78	81	85.8 ^c		
	Minimum...	59	60	63	59	66	72	74	72	66	63	66	63	68	68	61	58	60	56	56	56	55	63	63	61	66	62	66	62	61	64	63.4 ^d		
Boonton§§.....	Maximum...	82	84	80	72	92	96	103	96	89	72	71	86	91	95	85	87	80	78	78	82	83	90	91	88	85	86	85	81	85	88	82	85.3	
	Minimum...	51	62	64	52	63	66	69	75	71	69	62	62	63	66	59	51	60	50	48	49	48	56	59	64	65	69	61	50	63	51	55	59.8	
Elizabeth.....	Maximum...	84	87	84	77	97	97	105	98	92	83	71	87	96	98	87	87	81	76	77	85	87	92	93	91	85	87	85	81	88	84	87.4		
	Minimum...	53	62	65	55	66	73	74	74	74	67	64	68	66	67	60	55	59	53	56	49	55	60	64	63	72	72	62	54	67	56	59	62.7	
Flemington.....	Maximum...	84	87	83	80	98	103	108	104	94	84	73	83	96	98	87	88	83	78	79	87	88	95	93	92	90	87	87	85	88	90	87	89.0	
	Minimum...	56	57	67	56	65	75	75	77	74	68	65	70	67	67	64	55	61	53	55	49	50	63	62	71	72	65	53	68	57	69	63.1		
Highwood.....	Maximum...	83	85	79	74	95	93	103	93	89	82	88	82	90	94	81	86	74	72	74	80	84	88	90	87	87	85	80	76	83	79	78	83.4	
	Minimum...	55	58	64	54	65	72	72	74	74	66	62	66	64	66	60	54	60	51	53	48	52	63	62	66	71	61	50	64	56	57	61.7		
Jersey City.....	Maximum...	83	90	84	81	98	106	99	95	89	72	85	91	98	86	87	81	75	77	72	77	82	87	90	92	89	85	88	85	79	85	88	80	87.2
	Minimum...	60	64	68	62	66	77	78	79	77	69	64	70	70	72	66	63	65	62	59	58	60	64	67	67	72	70	68	64	60	62	67	67.1	
Lambertville.....	Maximum...	80	84	80	76	93	100	105	96	90	86	77	86	91	82	83	82	74	70	70	73	76	82	84	89	91	89	87	83	78	87	84	85.6 ^e	
	Minimum...	56	59	58	58	66	74	76	76	75	69	66	71	67	66	62	56	60	53	50	50	53	60	65	65	71	62	62	54	59	64	62.6 ^f		
Little Falls.....	Maximum...	83	87	80	79	95	103	95	92	80	73	86	93	93	85	84	78	78	78	78	82	84	90	92	90	84	87	83	78	87	84	80	85.8 ^g	
	Minimum...	56	57	61	56	65	73	77	75	75	65	63	68	67	68	61	55	58	51	54	48	53	64	63	67	69	71	62	57	55	57	62.4		
Newark.....	Maximum...	83	87	80	73	96	105	98	90	79	70	85	94	97	86	87	79	73	76	73	76	82	84	89	91	89	80	87	83	75	87	79	85.3	
	Minimum...	60	63	68	61	65	78	79	79	77	67	64	69	70	75	67	65	64	57	59	60	58	62	67	66	73	69	58	69	63	63	66.7		
New Brunswick.....	Maximum...	79	85	81	79	94	96	106	97	94	88	71	85	91	94	90	85	85	74	72	81	82	86	89	88	87	86	85	77	85	87	86	86.0	
	Minimum...	57	60	68	59	65	76	78	75	74	67	64	69	67	68	65	57	62	54	57	51	54	61	65	64	71	71	64	56	66	59	62	64.1	
Palisades Park.....	Maximum...	84	86	77	76	96	95	103	95	90	76	70	84	91	96	84	86	76	73	76	83	84	89	91	88	79	87	82	76	85	84	79	84.5	
	Minimum...	54	59	58	53	66	74	73	74	74	64	63	66	64	59	54	57	52	54	49	52	62	62	66	71	66	60	52	66	58	61	61.5		
Paterson.....	Maximum...	84	87	82	76	95	104	97	90	88	69	84	94	97	88	87	81	76	78	78	84	87	92	94	90	85	87	84	78	86	80	86.0 ^h		
	Minimum...	57	60	66	65	76	76	74	73	67	67	72	67	71	64	59	63	55	56	52	57	65	65	65	71	72	64	56	66	59	60	64.5 ⁱ		
Plainfield.....	Maximum...																																	
	Minimum...																																	
Somerville.....	Maximum...	84	86	84	80	99	102	108	104	96	86	72	86	96	98	92	88	82	76	77	85	86	92	91	91	86	90	86	80	88	89	87	88.7	
	Minimum...	54	54	64	52	66	72	74	78	74	66	63	70	68	68	64	52	58	49	56	47	49	58	61	60	68	69	61	49	66	55	60	61.5	
South Orange.....	Maximum...	80	84	79	75	92	93	101	93	89	78	70	83	91	94	82	82	75	73	73	79	82	87	89	86	80	86	81	75	85	87	80	83.4	
	Minimum...	57	60	63	57	66	77	78	75	75	66	64	69	68	70	64	58	60	55	57	54	56	63	65	65	72	71	64	57	68	59	61	64.4	
New York, N. Y.....	Maximum...	80	83	78	72	91	93	102	94	88	73	70	83	88	92	82	83	76	71	73	79	81	85	88	85	81	85	82	72	8				



Scale of Shades.

0 to 2 inches.
2 to 4 inches.
4 to 6 inches.
6 to 8 inches.
Over 8 inches.

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CLIMATOLOGICAL DATA

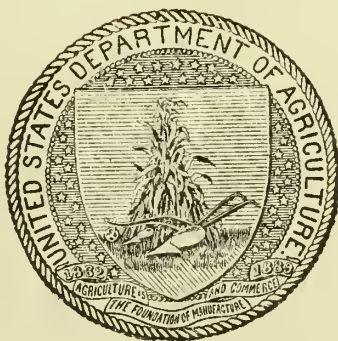
NEW JERSEY SECTION

SEPTEMBER, 1918.

BY

G. HAROLD NOYES

METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
OCTOBER 21, 1918.

Departure of the Mean Temperature from the Normal, September, 1918.



Shaded portions show excess (+).
Unshaded portions show deficiency (-).
Lines show amount of excess or deficiency.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

VOL. XXIII. TRENTON, N. J., SEPTEMBER, 1918. No. 9.

GENERAL SUMMARY.

Pleasant weather prevailed in the greater portion of New Jersey during September, 1918. There was an abundance of sunshine and showers, and slightly deficient temperature tended to prevent unfavorable results from the lack of rain in the previous month. The months of September in 1887 and 1917 are the only records of lower monthly means than the same month this year, but no very severe cold developed. Freezing occurred only in the northernmost regions of the State during portions of the closing week, and the few frosts that occurred were neither heavy enough nor early enough to do much damage. Otherwise weather conditions were normal. The 4th, 5th, 16th and 17th were practically the only days on which the warmth was up to normal or above, while on the 8th, 11th, 21st and 22d, temperatures were 10° or more below normal. A general and heavy fall of rain on the 18th in mostly all instances restored the necessary soil moisture and permitted fall ploughing that had been prevented by the previous drought. Growth of pastures, meadows, grass and winter grains were benefited by the rains, and some crops that were doubtful and discouraging took on new growth and indicated a better yield.

The mean stage of the Delaware River at Phillipsburg was 1.2 feet, the highest being 3.9 feet on the 28th. At Trenton the mean daily stage was 0.5 foot, which was 0.7 foot below normal; the highest stage was 2.4 feet on the 29th, and the lowest, minus 0.1 foot on the 1st and 2d.

The temperature departure from the normal for the year 1918 to date, by sections, is: The Highlands, -0.7°; Red Sandstone Plain, -0.6°; Southern Interior, -0.6°; The Seacoast, -1.3°. The precipitation accumulated departure from normal for the year 1918 to date is: The Highlands, -3.92; Red Sandstone Plain, -8.01; Southern Interior, -4.44; The Seacoast, -6.01. No storm warnings were displayed during the month.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 32 stations, was 62.2°, which was 3.3° below normal. The highest temperature was 90° at Bridgeton on the 5th, and the lowest, 29° at Charlotteburg and Culvers Lake on the 25th and 27th, respectively. The warmest stations were Atlantic City and Cape May City, 65.4°, and the coolest, Charlotteburg, 57.1°. The greatest daily range of temperature was 40° at Indian Mills on the 15th. Low temperatures penetrated a considerable distance to the southward, in the interior of the State, between the Delaware River and the ocean, reaching central portions of Burlington County.

PRECIPITATION.

The average total rainfall of the State, as deduced from observations of 39 stations, was 3.84 inches, which was normal. The greatest monthly rainfall was 6.00 inches at Belvidere, and the least, 2.66 at Atlantic City. The largest amount to fall in any 24 consecutive hours was 2.59 inches at Moorestown on the 18th. The rainfall was distributed with general uniformity throughout the State, and the individual variations from normal were not materially large. The average number of days on which 0.01 inch or more rain fell was 9, which was 1 more than normal.

WIND.

The prevailing wind direction was from the northwest, with an approximate velocity of 11 miles per hour; which was the same as last year. The highest velocity was 56 miles per hour from the northwest at Long Branch on the 20th.

SUNSHINE AND CLOUDINESS.

The average number of clear days throughout the State was 14, which was normal; partly cloudy, 8, which was 1 less than normal; cloudy, 8, which was 1 more than normal. The approximate percent. of possible sunshine was 65, which was probably about normal.

MISCELLANEOUS.

Atmospheric pressure, reduced to sea level, averaged 30.05 inches, which was 0.02 inch below normal. Light frost occurred on the 11th, 22d, 25th, 26th, 27th, 28th and 30th, and heavy frost on the 30th on the cranberry bogs. Frost was denominated "killing," on the 25th, 27th and 30th in some of the extreme northern sections. Thunderstorms were reported in portions of the State on the 1st, 6th, 13th, 17th, 18th, 20th, 21st and 26th. Hail occurred at Tuckerton on the 18th. The aurora was observed at Palisades Park and Phillipsburg on the 29th. Dense fog occurred on the 6th, 10th, 13th and very generally on the 19th. Solar halos were observed on the 3d, 24th and 28th; a lunar halo on the 24th.

ERRATA.

August, 1918.—Page 59, Errata, July 1918, Dover and Somerville, date of "lowest," should read date of "highest." Comparative Data, Precipitation, Greatest in 1918, 3.55 should read 4.25. Page 60, Phillipsburg: departure from normal precipitation, -3.92, should read -3.02. Boonton: minimum on the 6th, 66, mean minimum 59.8, and mean temperature 72.6, should read, respectively, 65, 59.7, and 72.5. Elizabeth: highest temperature 108, should read 105; number of cloudy days, 4, should read 5. Little Falls: departure from normal precipitation -2.54, should read -2.59. Newark: total precipitation 1.94, should read 2.94. South Orange: mean maximum temperature 88.7, should read 88.6, and departure from normal +2.2, should read +3.2. New York: number cloudy days, 0, should read 8. Means and extremes—Red Sandstone Plain: date of highest temperature, 2, should read 7. Philadelphia: number of clear days, 0, should read 9.

COMPARATIVE DATA FOR SEPTEMBER.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more prec.
1885.....	64.2	93	38	0.83	1.69	0.25				
1886.....	66.9	95	36	1.13	1.76	0.86				
1887.....	61.6	90	30	3.66	6.25	1.62				7
1888.....	63.1	84	29	7.09	10.65	3.75			14	12
1889.....	64.8	90	34	8.36	13.13	3.17			14	14
1890.....	64.4	91	33	4.75	8.61	2.59	10	10	10	10
1891.....	68.7	95	39	2.46	5.91	0.90	16	9	5	6
1892.....	64.2	90	33	1.81	3.78	1.02	15	11	4	6
1893.....	62.7	90	31	3.20	5.38	1.93	12	10	8	8
1894.....	68.8	97	31	7.46	11.65	3.69	10	10	10	8
1895.....	69.7	109	29	1.07	2.71	0.22	17	10	3	5
1896.....	65.1	95	30	4.37	8.74	2.26	19	7	4	5
1897.....	65.5	99	30	1.65	3.97	0.21	19	7	4	5
1898.....	68.6	100	31	2.00	3.87	0.65	17	8	5	6
1899.....	64.4	93	30	5.88	9.61	2.88	15	9	6	9
1900.....	69.9	98	32	2.86	7.37	1.09	14	10	6	6
1901.....	66.8	94	29	3.38	6.82	1.63	15	9	6	10
1902.....	64.6	93	30	5.65	8.95	3.11	11	7	12	13
1903.....	65.0	92	29	3.34	7.10	1.39	17	8	5	7
1904.....	64.8	93	28	4.79	10.08	0.89	14	10	6	7
1905.....	65.4	90	28	5.23	9.18	2.87	16	7	7	8
1906.....	68.9	94	33	2.19	4.66	0.75	15	9	6	7
1907.....	67.1	92	31	8.08	12.95	3.55	10	8	12	14
1908.....	65.7	90	29	2.09	4.13	0.95	11	10	9	3
1909.....	64.5	89	30	3.30	4.58	2.08	11	10	9	8
1910.....	67.3	97	32	2.39	3.97	1.01	12	10	8	6
1911.....	66.4	90	30	2.88	5.33	1.08	10	12	8	9
1912.....	65.9	87	28	4.47	6.76	2.68	12	7	11	10
1913.....	64.4	96	27	3.87	6.55	1.56	13	8	9	9
1914.....	64.0	99	24	0.37	1.64	0.14	21	6	3	3
1915.....	68.5	97	30	2.08	4.46	0.55	17	9	4	5
1916.....	65.2	98	31	2.84	5.29	1.29	20	7	3	6
1917.....	67.5	87	25	2.74	6.13	0.47	16	7	7	6
1918.....	62.2	90	29	3.84	6.00	2.66	14	8	8	9

Climatological data for September, 1918.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.							Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation of in. or more.	Clear.	Pt. cloudy.	Cloudy.		
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	27	60.6 ^b	-4.5	83	4	37 ^a	30	34	6.00	+2.08	1.41	0	9	.....	.....	.....	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	26	57.1 ^c	-5.2	78	3 [†]	29	25	38	4.50	-0.18	1.45	0	8	17	9	4	w.	George S. Briggs.
Culvers Lake ^{††}	Sussex.....	848	17	.....	.....	.....	.....	29	27	.....	5.46	+1.65	1.47	0	14	15	9	6	e.	Brice E. Riker.
Dover.....	Morris.....	600	34	58.6	-4.0	81	4	35	25	32	3.91	-0.57	1.12	0	8	4	17	9	.....	William C. Harris.
Layton.....	Sussex.....	480	18	58.4	+3.4	85	4	32	30	37	5.67	+1.80	1.31	0	10	13	3	14	sw.	A. M. Depue.
Newton.....	Sussex.....	769	37	59.9 ^b	-3.7	81	4	36 [†]	28	.....	3.34	-0.34	0.64	0	10	8	11	11	nw.	Irving G. Kern.
Phillipsburg.....	Warren.....	363	36	61.0	-4.4	85	4	39	30	34	4.05	+0.27	1.87	0	9	16	7	7	nw.	D. Wilson Smith.
Means and extremes.....				59.3	-4.2	85	4	29	25 [†]	38	4.70	+0.67	1.87	0	10	12	9	9	nw.	
<i>The Red Sandstone Plain.</i>																				
Bergen Point ^{††}	Hudson.....	37	21	64.4	-2.3	86	16	40	27	30	3.36	-1.17	1.50	0	8	8	15	7	se.	William H. Mitchell.
Boonton.....	Morris.....	400	28	59.2 ^a	.....	82	1 [†]	35	25 [†]	36	3.60	-0.89	1.13	0	10	.....	.....	.....	nw.	J. W. Demmers.
Chatham.....	Morris.....	330	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Paul Molitor.
Elizabeth.....	Union.....	45	39	63.5	-3.5	85	4	37	30	36	3.17	-0.89	1.34	0	9	16	7	7	nw.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	30	63.6	-1.5	86	5	36	30	36	3.22	-0.76	1.36	0	8	17	8	5	nw.	Hiram E. Deats.
Highwood.....	Bergen.....	90	29	60.4	-3.8	79	1 [†]	37	25	31	3.13	-1.03	1.04	0	11	10	11	9	nw.	Charles J. Bates.
Jersey City.....	Hudson.....	10	19	64.8	-2.4	84	4	46	21 [†]	27	3.10	-0.61	1.36	0	8	11	11	8	nw.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	31	61.0	-5.0	81	4 [†]	38	30	30	2.93	-1.25	1.10	0	6	11	8	11	e.	Thomas R. Hunt.
Little Falls.....	Passaic.....	180	15	61.2	.....	82	4 [†]	39	30	31	2.91	-1.69	1.10	0	6	18	2	10	w.	Montclair Water Co.
Newark ^{††}	Essex.....	159	76	63.0	-2.9	81	4 [†]	42	27	27	2.82	-1.03	1.50	0	10	15	6	9	nw.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	110	65	62.7	-3.3	83	16	40	27 [†]	31	3.32	-0.53	1.31	0	11	18	6	6	se.	N. J. Experiment Station.
Palisades Park.....	Bergen.....	80	3	60.4	.....	80	1 [†]	38	25 [†]	32	2.74	.....	1.33	0	10	11	12	7	sw.	George P. Kirsten.
Paterson.....	Passaic.....	80	47	63.4	-2.8	82	16	42	27 [†]	29	3.82	-0.62	1.27	0	9	7	9	14	nw.	Marion T. Probert.
Pompton Plains.....	Morris.....	195	16	.....	.....	.....	.....	.....	.....	.....	5.40	+0.85	1.74	0	10	.....	.....	.....	.....	M. S. Taylor.
Somerville.....	Somerset.....	60	36	61.6	-3.7	85	4	33	30	37	4.30	+0.64	1.43	0	10	16	8	6	nw.	A. A. Macdonald.
South Orange.....	Essex.....	200	48	61.2	-2.9	81	4	40	30	26	3.71	-0.38	1.30	0	10	14	6	10	w.	Dr. W. J. Chandler.
New York, N. Y.....		365	48	62.8	-3.7	80	4	44	27	24	3.54	-0.05	1.48	0	9	5	14	11	nw.	U. S. Weather Bureau.
Means and extremes.....				62.2	-3.1	86	5 [†]	33	30	37	3.44	-0.67	1.74	0	9	13	9	8	nw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	37	64.5	-3.7	90	5	42	22 [†]	30	4.20	+0.39	1.22	0	10	23	1	6	sw.	Henry A. Jorden.
Burlington.....	Burlington.....	12	32	64.8	-2.2	88	5	40	30	35	4.86	+0.94	2.25	0	9	21	3	6	nw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	26	64.4	-2.3	87	5	38	30	37	3.57	-0.45	1.17	0	10	19	5	6	nw.	Melvin F. Wills.
Hammonton.....	Atlantic.....	103	16	.....	.....	.....	.....	.....	.....	.....	4.03	+0.37	1.39	0	8	21	2	7	sw.	G. H. Parkhurst.
Hightstown.....	Mercer.....	120	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	G. Franklin Eldridge.
Indian Mills.....	Burlington.....	76	29	62.4	-3.7	86	16	35	30	40	3.58	-0.59	1.35	0	9	14	11	5	nw.	James M. Armstrong.
Lakehurst.....	Ocean.....	119	.....	61.3	.....	84	16	36	30	34	3.10	.....	1.40	0	7	12	9	9	nw.	U. S. Proving Ground.
Lakewood.....	Ocean.....	54	15	61.6	-3.8	83	17	35	30	33	3.84	-0.04	1.35	0	9	11	10	9	sw.	R. W. Holman.
Moorestown.....	Burlington.....	75	56	63.4	-2.6	83	5	40	30	31	5.44	+1.68	2.59	0	7	16	10	4	nw.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	11	.....	.....	.....	.....	.....	.....	.....	3.49	+0.19	0.75	0	9	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	20	.....	.....	.....	.....	.....	.....	.....	3.91	+0.50	1.45	0	9	24	3	3	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	47	62.6	-4.3	83	5	42	27	27	3.20	-0.39	1.85	0	9	12	9	9	nw.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	25	63.6	-2.4	86	5	36	30	37	4.37	+1.01	1.29	0	9	15	11	4	se.	Frank R. Austin.
Vineland.....	Cumberland.....	109	50	.....	.....	85	16	42	30	32	.....	.....	.....	0	.....	.....	.....	.....	.....	H. C. Himes.
Woodbine.....	Cape May.....	43	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Baron de Hirsch Agr. Sch.
Philadelphia, Pa.....		117	48	65.1	-2.3	84	5	45	27	23	3.76	+0.38	2.33	0	12	11	9	10	nw.	U. S. Weather Bureau.
Means and extremes.....				63.2	-3.1	90	5	35	30	40	3.97	+0.33	2.59	0	9	17	7	6	nw.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	29	.....	.....	.....	.....	.....	.....	.....	3.63	+0.39	1.15	0	6	14	10	6	w.	Miss Dorothy A. Alexander.
Atlantic City.....	Atlantic.....	16	45	65.4	-2.2	81	1	46	22	25	2.66	-0.39	0.79	0	10	16	7	7	nw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	34	65.4	-3.6	80	4	48	22	24	3.41	+0.41	0.82	0	12	16	9	5	n.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	11	.....	.....	.....	.....	.....	.....	.....	4.90	+1.60	1.76	0	8	9	11	10	nw.	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	20	64.2	-3.2	80	17	47	27	23	3.22	-0.82	1.36	0	9	11	11	8	nw.	U. S. Weather Bureau.
Means and extremes.....				65.0	-3.0	81	1	46	22	25	3.56	+0.24	1.76	0	9	13	10	7	nw.	
For the State.....				62.2	-3.3	90	5	29	25 [†]	40	3.84	0.00	2.59	0	9	14	8	8	nw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

†† Received too late to be included in the means.

Reference letters, ^a, ^b, ^c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T. precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Imlaystown is Cream Ridge.

Daily precipitation for September, 1918.

Stations.	Watershed.	Day of month.																															Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
<i>The Highlands and Kittatinny Valley.</i>																																	
Belvidere.....	Delaware.....	1.35					.06		.33				.41	1.02					1.41		*	1.07					.35						6.00
Charlotteburg.....	Passaic.....	1.45					.10		.15				.17						.85		*	.73					1.05						4.50
Culvers Lake.....	Delaware.....	1.47					.04		.03	.07			.01	.55			.01	.02	1.02		1.05	.06		T.		.02	1.10	.02					5.46
Dover.....	Passaic.....	1.10					.12		.01	.12			.07						1.12		*	.79					.58						3.91
Layton.....	Delaware.....	1.81							.13				.15	.36				.02	T.	.99		.34	.68		T.		.05	1.14					5.67
Newton.....	Delaware.....	.84					.08		.09	.03			T.	.38				.02	.64	T.	.21	.58		T.			.47	T.					3.34
Phillipsburg.....	do.....						.02		.15				1.71	.16				T.	.90		.75	.19					.14				.03		4.05
Sussex.....	Hudson.....																																
<i>The Red Sandstone Plain.</i>																																	
Bergen Point.....	Coast.....	.90						T.		*	.20			.20				T.	1.50	T.	*	.36					.20						3.26
Bononton III.....	Passaic.....	1.13					T.		.07				.01	.17			T.	.33	.55	.28	.61			T.			.39	.06					3.60
Chatham II.....	do.....	1.21																															3.17
Elizabeth.....	Coast.....	.52					.05	T.	.05	.07			.28					.03	1.34	T.	*	.83				T.	T.						3.22
Flemington.....	Raritan.....	1.36					T.	.02	.06				T.	.05			T.	T.	.84		.31	.50					.08						
Highwood.....	Hackensack.....	.57					.02	.01	.10	.04			.37					T.	1.04		.38	.54		T.		T.	.05	.01					3.13
Jersey City**.....	Coast.....	1.13					.01	T.	.18	.13			.30	.15				T.	1.36		.53	.46		T.		T.	.11						3.10
Lambertville.....	Delaware.....	1.03					T.	T.	.15				T.					T.	1.10		*	.60				.05							2.93
Little Falls**.....	Passaic.....	T.					T.	T.	.10				T.	.73					1.10		.40	.48		T.		.10					T.		2.91
Newark**.....	Coast.....			T.			.01	.02	.06				.16	.05					1.50		.70	.22				.04					.06		2.82
New Brunswick.....	Raritan.....	.64			T.		.17	T.	.06	.01			.03					.12	1.31	.02	.33	.58				.05	T.						3.32
Palisades Park.....	Hackensack.....						.02	.01	.13				.28						1.33		*	.78		.01		T.	.10	.08					2.74
Paterson.....	Passaic.....	1.27					T.	T.	.03	.06			.84					T.	1.06		.15	.31		T.		T.	.06	.04					3.82
Plainfield**.....	Raritan.....																																
Pompton Plains I.....	Passaic.....	1.74								.12			.73	.11					.73	.56	.14	.65					.49	.13					5.40
Somerville.....	Raritan.....	1.38					.18	.16	.04	.02			.09						1.43	.02	.47	.51				T.							4.30
South Orange.....	Rahway.....	.83					.06		.08	.03			.52					.03	1.30		.54	.30				.02							3.71
New York, N. Y***.....	Coast.....						T.	T.	.22				.16	.27				.23	1.35		.69	.26			T.	.17				.19			3.54
<i>The Southern Interior.</i>																																	
Bridgeton.....	Coast.....	.57				1.20	.30	*	.15				.08						.60		1.00	.22					.08						4.20
Burlington.....	Delaware.....	.68				.24	.02	.11	.03				T.					T.	2.25		.92	.55				.06							4.86
Clayton.....	Maurice.....	.45				.41	.09	.13	.06	T.									1.17	.02	.60	.55				T.	.06	T.	T.				3.57
Hammononton.....	Mullica.....	.38				.67	.03	.37											1.39		.56	.49				.11							4.03
Hightstown.....	Raritan.....																																
Indian Mills.....	Mullica.....	.53		T.		.22	.05	.24											1.35		.53	.50				.06	.10						3.58
Lakehurst.....	Toms.....	T.		T.		T.	T.	.43					T.					.03	1.37		.86	.23				.11					.07		3.10
Lakewood.....	Metedeconk.....	.43				T.	T.	.33	.23				.09						1.35		.44	.60				.04	.33						3.84
Moorestown.....	Delaware.....	.72				.79	T.	.12	.04									2.59		.64	.54				T.								5.44
Northfield.....	Coast.....	.45				.02	.31	.75	.61										.40		.10	.55				.30							3.49
Pleasantville.....	Coast.....	.40					.10	1.42	.03										.42		.12	.47					.85	.10					3.91
Trenton***.....	Delaware.....					.14	.01	.07					T.	T.				.01	1.85		.75	.17			T.	.04					.16		3.20
Tuckerton.....	Coast.....	.55				.04	.11	.64	.65										.93		.38	.56				.51							4.37
Vineland.....	Maurice.....							.22	.05				T.						*		*	2.13				.09							3.57
Woodbine.....	Coast.....																																
Philadelphia, Pa.....	Delaware.....			T.		.02	.04	.05	.09	T.			.01	.01				.43	1.91		.91	.09					.05				.15		3.76
<i>The Sea Coast.</i>																																	
Asbury Park.....	Coast.....					.07		.71				.13							1.15		1.15						.42						3.63
Atlantic City***.....	do.....					.07	.24	.77	.02									.16	.16		.51	.26				.46							2.66
Cape May City.....	do.....	.60				.01	.42	.79	.03									.01	.26		.20	.46	.15			.14	.34						3.41
Long Branch**.....	do.....					T.	.01	.70	.03				.17						1.76		.40	.36				.60					.90		4.90
Sandy Hook***.....	do.....			T.		T.	T.	.24				.10	.01					.18	1.18		.52	.27			T.	.46				.26			3.22

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded.

|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.

* Precipitation included in the next following measurement. ** Precipitation for 24-hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

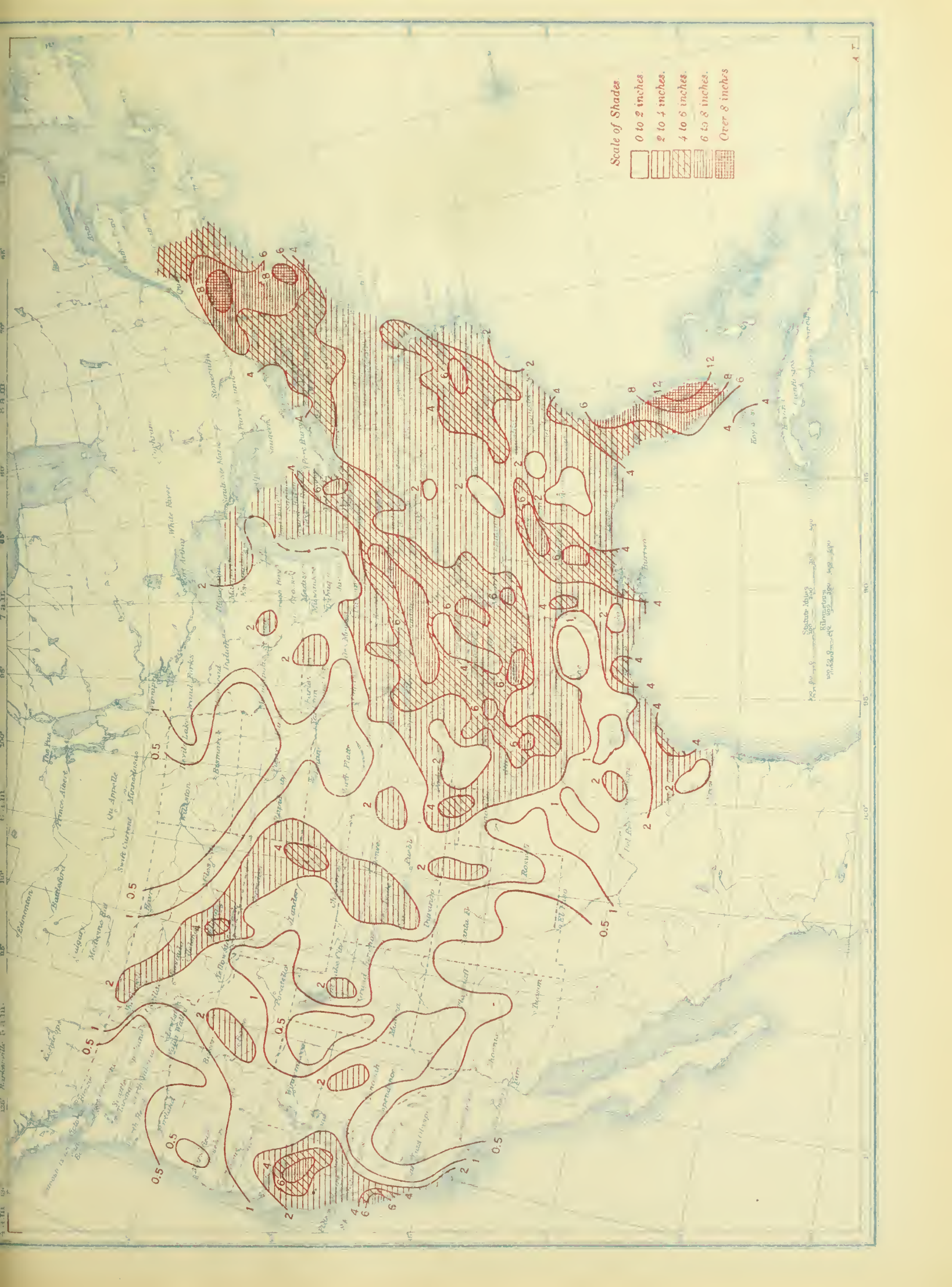
Stations.	Pressure.					Wind.			Moisture.		Sun- shine	
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, per cent. at 8 a. m.		Relative humidity, per cent. at 8 p. m.
							Miles per hour.	Direction.	Date.			
Atlantic City.....	30.06	30.37	23	29.79	6	7	20	e.	11	79	75	69
Cape May City.....	30.08	30.36	22	29.83	6	8	30	nw.	20			
Long Branch.....							56	nw.	30			
Newark.....							24	nw.	21	71*	65†	66
New York, N. Y.....	30.04	30.36	11	29.76	18	16	43	sw.	28	75	68	65
Palisades Park.....	30.03	30.35	11	29.75	18							
Philadelphia, Pa.....	30.06	30.37	23	29.78	18	9	26	nw.	20	75	67	63
Sandy Hook.....	30.05	30.37	11	29.75	18	16	48	nw.	30	77	73	60
Trenton.....	30.04	30.36	23	29.78	29	10	29	sw.	28	81	69	66

§ Two directions and dates

* 7 a. m. † 9 p. m.

Daily temperatures for September, 1918.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.
<i>The Highlands and Kittatinny Valley</i>																																
Belvidere.....	Maximum	81	81	79	83	80	75	72	64	77	78	68	70	71	73	74	78	75	64	73	70	61	64	68	65	65	61	62	62	71	71	71.5
	Minimum	56	50	50	62	63	53	53	44	48	42	55	59	46	46	50	62	52	52	48	42	40	42	49	52	52	40	46	46	47	49.6	
Charlotteburg.....	Maximum	74	73	78	78	76	65	69	60	73	70	70	66	70	69	75	75	64	64	76	58	58	63	60	58	62	64	67	66	65	68.3	
	Minimum	57	57	46	56	56	58	50	48	46	41	41	53	58	41	37	44	50	45	50	40	39	36	36	36	52	37	34	45	33	45.9	
Dover.....	Maximum	77	79	75	81	79	72	68	62	74	78	64	68	72	72	75	77	77	61	74	68	60	62	66	64	59	62	62	69	69	69.7	
	Minimum	57	48	51	60	59	54	51	51	42	48	43	54	52	44	43	50	55	52	50	48	41	39	40	46	35	49	36	42	47	47.5	
Layton.....	Maximum	79	81	79	85	82	74	74	58	74	75	68	68	69	74	79	74	73	58	75	61	60	60	66	65	56	64	61	70	68	63	69.8
	Minimum	48	47	52	58	63	59	51	49	45	46	36	55	54	43	43	52	53	49	51	52	40	39	42	50	35	51	34	34	41	32	46.9
Newton.....	Maximum	78	76	76	81	78	78	68	68	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74	74.4
	Minimum	56	50	49	56	61	56	51	46	46	46	46	41	58	45	45	48	54	60	50	52	41	41	41	41	41	41	41	41	41	41	49.4
Phillipsburg.....	Maximum	80	84	81	85	84	71	73	60	78	78	71	70	72	75	80	78	75	61	78	65	61	62	69	66	63	66	63	72	71	70	72.1
	Minimum	58	51	56	62	65	56	53	53	45	50	44	57	54	47	46	56	56	52	52	46	43	42	45	47	40	50	40	43	46	39	49.8
Sussex.....	Maximum	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Minimum	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<i>The Red Sandstone Plain.</i>																																
Bergen Point.....	Maximum	80	81	81	80	78	76	71	64	75	80	71	74	75	75	75	86	78	73	79	73	63	64	69	69	67	69	69	73	73	73	73.8
	Minimum	63	58	64	67	68	69	56	59	54	54	59	59	60	49	50	56	66	54	55	56	44	44	45	47	51	59	49	45	49	46	54.9
Boonton§§.....	Maximum	82	79	79	82	82	71	74	63	79	77	67	72	73	74	77	80	78	64	77	72	61	61	67	67	61	64	63	69	70	66	71.4
	Minimum	57	47	58	58	58	62	52	53	49	45	42	48	57	46	41	46	53	52	47	53	43	41	39	49	35	40	40	35	40	35	47.0
Elizabeth.....	Maximum	82	81	82	85	83	78	74	69	79	83	77	71	77	77	79	84	83	68	82	73	66	66	71	71	66	69	67	73	73	73	75.5
	Minimum	58	51	54	61	60	64	54	60	50	51	50	60	62	46	46	51	65	55	52	57	43	40	42	51	40	58	38	42	46	37	51.5
Flemington.....	Maximum	83	83	81	85	86	83	74	65	75	82	79	70	71	78	79	82	83	68	82	73	66	71	69	66	65	67	73	73	71	71	75.9
	Minimum	60	51	56	63	62	63	55	57	51	50	48	59	62	48	46	51	65	54	51	54	45	44	44	50	40	50	38	41	44	36	51.3
Highwood.....	Maximum	79	77	76	79	78	72	67	62	72	77	64	70	74	72	75	76	79	64	76	71	61	61	65	64	60	66	62	71	70	66	70.2
	Minimum	58	50	52	62	60	63	54	53	51	49	47	57	60	46	44	51	63	53	49	54	44	38	42	52	37	55	40	43	49	38	50.5
Jersey City.....	Maximum	78	82	80	84	81	81	74	65	77	82	68	72	77	79	80	81	80	67	80	72	63	65	69	69	65	68	65	72	73	66	73.8
	Minimum	65	61	64	67	67	67	57	54	58	51	58	60	54	53	58	67	55	57	56	46	46	50	54	48	50	45	48	53	47	47	55.8
Lambertville.....	Maximum	78	76	75	81	81	76	74	62	74	74	69	73	72	73	76	80	65	73	68	58	44	43	42	43	41	59	41	42	45	38	51.2
	Minimum	59	51	55	62	62	60	55	54	49	50	49	59	62	46	46	55	65	54	53	52	44	43	42	43	41	59	41	42	45	38	51.2
Little Falls.....	Maximum	77	80	80	82	81	75	71	66	75	77	68	74	74	74	75	82	82	64	75	73	63	63	69	69	63	67	64	70	70	70	72.4
	Minimum	57	51	53	61	60	60	55	54	50	50	46	58	52	46	45	51	59	53	50	49	45	42	43	46	40	53	42	40	48	39	49.9
Newark.....	Maximum	80	79	77	81	78	71	71	62	77	79	66	71	74	74	75	81	81	63	80	71	62	62	68	66	63	67	64	72	71	68	71.8
	Minimum	63	59	59	66	65	61	57	55	54	56	50	58	60	53	57	58	60	54	53	49	45	46	51	53	46	52	42	45	52	48	54.2
New Brunswick.....	Maximum	82	77	78	82	81	76	70	69	74	80	73	69	75	75	75	83	83	74	78	77	61	62	67	69	64	68	69	69	71	69	73.3
	Minimum	61	53	55	62	62	62	55	55	52	57	49	58	62	51	47	52	66	53	50	55	44	43	44	49	41	57	40	43	49	40	52.2
Palisades Park.....	Maximum	80	80	78	80	79	69	69	62	75	79	62	72	76	75	77	78	79	61	79	70	63	63	68	67	62	67	62	72	72	67	71.4
	Minimum	55	50	52	61	60	59	54	54	51	52	48	57	52	46	45	52	58	52	49	48	41	40	41	45	38	51	41	44	49	38	49.5
Paterson.....	Maximum	78	77	80	81	81	74	73	63	77	80	76	72	76	77	78	82	81	70	80	73	65	65	68	67	61	66	66	74	75	71	73.6
	Minimum	63	62	53	63	66	66	55	56	52	54	47	57	60	50	49	53	64	54	53	56	45	44	45	54	43	54	42	42	49	42	53.1
Plainfield.....	Maximum	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Minimum	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Somerville.....	Maximum	82	80	81	85	86	81	73	69	80	81	73	74	76	76	79	84	84	67	80	73	63	63	70	69	68	67	71	72	70	70	74.8
	Minimum	59	47	51	59	59	52	54	55	48	47	45	57	60	45	42	47	64	52	50	53	42	41	40	45	37	56	35	34	40	33	48.3
South Orange.....	Maximum	77	77	76	81	79	72	68	63	73	76	64	71	72	72	72	80	79	64	75	71	60	60	66	66	62	66	61	68	68	66	70.2
	Minimum	61	55	57	62	61	60	56	56	54	55	48	58	57	50	49	54	62	54	52	52	44	44	44	50	42	54	41	42	48	40	52.1
New York, N. Y.....	Maximum	78	77	76	80	76	70	68	63	73	77	62	70	73	72	73	77	78	63	79	72	61	60	65	66	64	68	63	67	70	65	70.2
	Minimum	62	61																													



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CLIMATOLOGICAL DATA

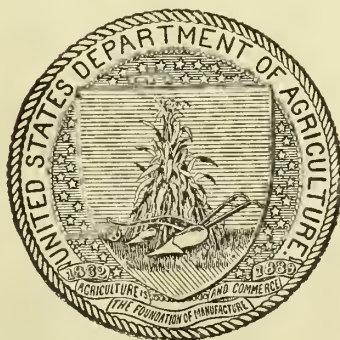
NEW JERSEY SECTION

OCTOBER, 1918.

BY

G. HAROLD NOYES

METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
NOVEMBER 18, 1918.

Departure of the Mean Temperature from the Normal, October, 1918.



Shaded portions show excess (+).
 Unshaded portions show deficiency (-).
 Lines show amount of excess or deficiency.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

VOL. XXIII. TRENTON, N. J., OCTOBER, 1918. No. 10.

GENERAL SUMMARY.

The remarkably fine weather of September continued throughout October, with slight temperature changes or variation from the normal, until the last seven days, when it was from ten to twenty degrees warmer than normal, corresponding to a week in early June or middle September. Rain fell infrequently and in small quantities, amounting to about a third of normal volume. The warm weather of the close of the month surpassed all records for the period of the year, and all features being considered it was a marked and agreeable contrast with October, 1917, which was very rainy and almost a record breaker for continuously low temperature. It was so dry that some farmers were forced to the extremity of hauling water for their stock in northwestern counties, in which section fall seeding has not been accorded an auspicious start. Farm work has been advantageously carried on, and the mild weather has favored an unusually good and late harvest of truck. Frosts more or less heavy occurred in practically all portions of the State except along the shore and middle and lower reaches of the Delaware, but its destructive effect was greatly mitigated by the dry ground.

The mean stage of the Delaware River at Phillipsburg was 2.0 feet, the highest stage being 4.8 feet on the 8th. At Trenton the mean daily stage was 1.0 foot, which was 0.6 foot below normal; the extreme variation for the month was but 0.8 foot.

The temperature departure from normal for the year 1918, to date, by sections is: The Highlands, -0.4° ; Red Sandstone Plain, -0.2° ; Southern Interior -0.2° ; Seacoast, -1.0° . The precipitation accumulated departure from normal for the year 1918, to date, by sections is: The Highlands, -6.19 inches; Red Sandstone Plain, -10.71 ; Southern Interior, -6.69 ; Seacoast, -8.31 .

No storm warnings were displayed during the month.

TEMPERATURE.

The mean monthly temperature for the State, as deduced from observations of 34 stations, was 57.0° , which was 3.0° above normal. The highest temperature was 84° at Indian Mills on the 29th, and the lowest, 22° at Charlotteburg on the 22d and 23d. The warmest station was Bridgeton, and the coolest, Charlotteburg. The greatest daily range of temperature was 45° at Somerville on the 24th.

PRECIPITATION.

The average total rainfall of the State, as deduced from observations of 40 stations was 1.25 inches, which was 2.43 inches below normal. The greatest monthly amount was 2.36 inches at Tuckerton, and the least 0.74 inch at Trenton and Sandy Hook. The greatest accumulated rainfall in any 24 consecutive hours was 0.89 inch at Cape May City on the 31st. The average number of days on which 0.01 inch or more rain fell was 8, which was normal.

WIND.

The prevailing wind direction for the month was from the southwest, with an approximate velocity of 10 miles per hour, which was somewhat less than normal. The highest velocity, sustained for 5 consecutive minutes, was 72 miles per hour from the northwest on the 6th, at Long Branch.

SUNSHINE AND CLOUDINESS.

The average number of clear days throughout the State was 16, which was 2 more than normal; partly cloudy, 9, which was 1 more than normal; cloudy, 6, which was 3 fewer than normal. The approximate percentage of possible sunshine was 64, which was somewhat above normal.

MISCELLANEOUS.

Atmospheric pressure, reduced to sea level, averaged 30.14 inches, which was 0.07 inch above normal; highest readings occurred on the 19th, and lowest on the 6th. Thunderstorms occurred very generally on the 6th, and on the 1st in southern sections, and 3d in northwestern counties. Solar halos were observed on the 9th, 23d, 25th and 29th; lunar halos on the 18th and 25th. The Aurora was visible on the 8th, 9th and 16th. Dense fog occurred in various portions of the State on the 3d, 9th, 13th, 17th, 18th, 25th, 27th, 28th, 29th, 30th. Killing frost occurred from Morris County northeastward on the 4th, and in the remainder of northern districts on the 8th, in portions of the central interior on the 9th and 15th and in other sections on the 20th, 21st and 23d. All other portions of the State reported heavy or light frosts on these dates, except along the seacoast and portions of the tidewaters of the Delaware.

ERRATA.

September, 1918.—Layton: departure from normal temperature, $+3.4$ should read -3.4 . Page 67, "Wind", date of highest velocity, 20th, should read 30th. "Errata", line 11, South Orange should read Somerville.

COMPARATIVE DATA FOR OCTOBER.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more prec.
1885.....	54.2	82	29	4.20	5.85	2.91	.....	.....	.....	.....
1886.....	55.6	82	21	3.22	8.16	2.02	.....	.....	.....	.....
1887.....	52.3	89	21	2.61	5.00	1.58	.....	.....	.....	.....
1888.....	49.2	73	25	4.73	7.00	2.97	.....	.....	10	12
1889.....	50.8	82	23	3.80	5.03	2.42	.....	.....	12	11
1890.....	53.9	81	24	6.33	10.18	3.40	9	8	14	13
1891.....	52.8	92	18	3.44	5.57	1.88	11	11	9	8
1892.....	53.6	85	21	0.52	1.09	0.04	14	12	5	4
1893.....	55.2	85	17	4.22	6.59	1.74	15	7	9	7
1894.....	55.3	87	27	5.67	8.23	3.90	12	7	12	10
1895.....	49.9	83	18	3.60	5.53	1.62	19	7	5	5
1896.....	51.5	82	21	2.24	4.58	1.27	11	8	12	8
1897.....	55.8	95	22	2.43	6.49	0.87	14	8	9	7
1898.....	56.5	88	24	5.76	8.42	3.92	13	9	9	10
1899.....	56.6	86	18	2.72	4.65	1.07	13	10	8	6
1900.....	59.9	92	19	3.70	6.59	1.47	10	8	13	10
1901.....	54.4	82	21	1.93	4.45	0.87	17	8	6	4
1902.....	56.0	80	20	6.39	9.35	3.82	15	7	9	8
1903.....	55.9	86	24	8.92	16.19	4.17	13	9	9	8
1904.....	51.9	89	15	3.78	7.01	1.50	20	6	5	5
1905.....	55.5	90	17	2.71	4.83	0.75	18	7	6	7
1906.....	55.0	80	17	4.46	7.14	2.66	8	9	14	11
1907.....	50.6	80	18	4.46	7.18	2.70	22	5	4	7
1908.....	57.3	92	19	2.71	5.14	1.30	15	5	11	8
1909.....	51.2	84	18	1.18	1.82	0.40	17	7	7	8
1910.....	57.2	90	18	3.15	5.55	1.55	15	8	8	7
1911.....	53.9	80	18	5.49	8.23	2.61	10	9	12	12
1912.....	57.0	88	25	3.30	6.95	1.72	17	8	6	5
1913.....	57.8	83	25	7.79	13.84	2.70	12	9	10	11
1914.....	58.1	88	19	1.99	3.08	0.90	13	9	9	5
1915.....	56.2	84	23	3.03	5.18	1.89	17	7	7	9
1916.....	55.1	92	23	1.37	2.38	0.51	18	8	5	4
1917.....	50.7	84	17	6.99	9.74	4.28	15	8	8	10
1918.....	57.0	84	22	1.25	2.36	0.74	16	9	6	8

Climatological data for October, 1918.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.							Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation .01 in. or more.	Clear.	Pt. cloudy.	Cloudy.		
The Highlands and Kittatinny Valley.																				
Belvidere.....	Warren.....	289	27	55.4 ^a	+2.9	81	29	30	23†	37	1.71	-2.13	0.60	0	8	19	5	7	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	26	52.2	+1.8	78	29	22	22†	43	1.56	-2.85	0.31	0	11	20	9	2	w.	George S. Briggs.
Culvers Lake†.....	Sussex.....	848	17	.....	.....	.....	.....	25	.....	.....	1.45	-2.20	0.42	0	9	21	1	9	e.	Brice E. Riker.
Dover.....	Morris.....	600	34	53.0	+2.3	78	29	27	23	36	1.47	-2.53	0.51	0	10	2	21	8	.....	William C. Harris.
Layton.....	Sussex.....	480	18	54.3	+4.7	78	6†	25	23†	42	2.17	-1.16	0.74	0	11	19	1	11	sw.	A. M. Depue.
Newton.....	Sussex.....	769	37	55.5 ^a	+3.8	78	29	31	9	32	1.23	-2.48	0.38	0	10	14	9	8	w.	Irving G. Kern.
Phillipsburg.....	Warren.....	363	36	56.0	+3.1	80	29	31	23†	35	1.03	-2.57	0.30	0	8	20	5	6	s.	D. Wilson Smith.
Means and extremes.....				54.4	+3.1	81	29	22	22†	43	1.52	-2.27	0.74	0	10	17	7	7	w.	
The Red Sandstone Plain.																				
Bergen Point†.....	Hudson.....	37	21	58.2 ^a	+3.9	79	6	35	24	31	1.26	-2.82	0.56	0	7	18	11	2	sw.	William H. Mitchell.
Boonton.....	Morris.....	400	28	53.1	.....	78	6	25	23	44	0.98	-2.86	0.30	0	8	25	5	1	sw.	J. W. Demmers.
Chatham.....	Morris.....	330	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Paul Molitor.
Elizabeth.....	Union.....	45	39	57.4	+2.7	82	29	30	23†	38	0.93	-2.89	0.30	0	9	14	15	2	se.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	30	58.3	+4.2	80	6	30	20†	41	1.54	-1.91	0.51	0	8	17	8	6	sw.	Hiram E. Deats.
Highwood.....	Bergen.....	90	29	54.7	+2.0	78	6	27	23	36	0.96	-3.57	0.26	0	7	12	10	9	se.	Charles J. Bates.
Jersey City.....	Hudson.....	10	19	59.0	+3.4	80	13	39	19	29	0.96	-2.79	0.32	0	6	15	11	5	sw.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	31	56.2 ^a	+2.6	77	29†	31	23†	32	2.03	-1.84	0.79	0	8	14	8	9	s.	Thomas R. Hunt.
Little Falls.....	Passaic.....	180	15	55.4 ^a	.....	81 ^b	29	32	23	33	0.92	-2.92	0.25	0	8	21	2	8	w.	Montclair Water Co.
Newark†.....	Essex.....	159	76	58.0	+3.6	78	6	39	19	26	0.80	-2.97	0.28	0	9	17	5	9	s.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	110	65	57.4	+2.8	80	29	32	20†	33	1.30	-2.29	0.51	0	9	17	11	3	sw.	N. J. Experiment Station.
Palisades Park.....	Bergen.....	80	3	55.0	.....	80	6	28	23	36	0.97	.....	0.28	0	9	12	14	5	s.	George P. Kirsten.
Paterson.....	Passaic.....	80	47	58.8	+4.4	82	6	34	20	34	0.79	-3.36	0.25	0	9	11	5	15	nw.	Marion T. Probert.
Pompton Plains.....	Morris.....	195	16	.....	.....	.....	.....	.....	.....	.....	1.07	-2.69	0.29	0	9	.....	.....	.....	.....	M. S. Taylor.
Somerville.....	Somerset.....	60	36	55.6	+2.2	80	29	25	20†	45	1.04	-2.37	0.27	0	7	14	13	4	sw.	A. A. Macdonald.
South Orange.....	Essex.....	200	48	55.6	+2.7	76	6	34	23	33	1.24	-2.57	0.45	0	8	13	14	4	e.	Dr. W. J. Chandler.
New York, N. Y.....		365	48	58.6	+3.0	75	11	40	8	22	0.83	-2.88	0.41	0	7	10	14	7	s.	U. S. Weather Bureau.
Means and extremes.....				56.6	+3.1	82	6†	25	20†	45	1.12	-2.70	0.79	0	8	16	9	6	sw.	
The Southern Interior.																				
Bridgeton.....	Cumberland.....	30	37	60.5 ^b	+3.8	82	27†	33	23	35	1.78	-1.75	0.68	0	7	21	7	3	se.	Henry A. Jorden.
Burlington.....	Burlington.....	12	32	59.5	+4.8	83	29	32	23	38	1.13	-2.32	0.44	0	6	23	5	3	nw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	26	58.9	+3.8	82	29	29	23	40	1.28	-2.23	0.57	0	7	22	5	4	sw.	Melvin F. Wills.
Hammonton.....	Atlantic.....	103	16	.....	.....	.....	.....	.....	.....	.....	1.24	-2.24	0.33	0	8	25	6	0	.....	G. H. Parkhurst.
Hightstown.....	Mercer.....	120	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	G. Franklin Eldridge.
Indian Mills.....	Burlington.....	76	29	58.6	+4.2	84	29	28	23†	43	1.03	-2.55	0.44	0	7	15	11	5	s.	James M. Armstrong.
Lakehurst.....	Ocean.....	119	.....	56.4	.....	83	29	28	23†	39	0.88	.....	0.35	0	7	12	6	13	sw.	U. S. Proving Ground.
Lakewood.....	Ocean.....	54	15	55.6	+0.3	81	29	27	23	42	1.05	-2.65	0.41	0	7	13	8	10	sw.	R. W. Holman.
Moorestown.....	Burlington.....	75	56	58.6	+4.4	82	29	31	24	40	1.12	-2.52	0.55	0	5	14	15	2	nw.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	11	.....	.....	.....	.....	.....	.....	.....	1.47	-2.03	0.46	0	7	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	20	.....	.....	.....	.....	.....	.....	.....	1.12	-2.56	0.42	0	8	20	4	7	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	47	58.1	+2.5	79	29	38	20	29	0.74	-2.67	0.24	0	6	12	5	14	s.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	25	57.4	+2.6	80	4†	29	23†	40	2.36	-1.31	0.86	0	6	19	10	2	sw.	Frank R. Austin.
Vineland.....	Cumberland.....	109	50	60.4 ^a	+5.0	81	29	35	22	35	1.24	-2.22	0.36	0	7	.....	.....	.....	.....	H. C. Himes.
Woodbine.....	Cape May.....	43	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Baron de Hirsch Agr. Sch.
Philadelphia, Pa.....		117	48	60.6	+4.3	79	29	42	19	25	0.69	-2.41	0.32	0	5	11	11	9	sw.	U. S. Weather Bureau.
Means and extremes.....				58.4	+3.5	84	29	27	23	43	1.26	-2.25	0.86	0	7	18	7	6	sw.	
The Sea Coast.																				
Asbury Park.....	Monmouth.....	22	29	.....	.....	.....	.....	.....	.....	.....	0.93	-2.85	0.30	0	5	18	6	7	nw.	Miss Dorothy A. Alexander.
Atlantic City.....	Atlantic.....	16	45	59.5	+2.1	78	3	40	15	25	1.43	-1.87	0.65	0	7	12	12	7	sw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	34	60.0	+0.4	78	3	42	22	23	1.56	-1.74	0.89	0	8	14	11	6	se.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	11	55.8	+0.8	77	6†	36	23	36	1.49	-2.16	0.69	0	6	11	13	7	sw.	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	20	58.9	+2.2	74	13	45	19	19	0.74	-2.86	0.35	0	6	12	13	6	s.	U. S. Weather Bureau.
Means and extremes.....				58.6	+1.4	78	3	36	23	36	1.23	-2.30	0.89	0	6	13	11	7	sw.	
For the State.....				57.0	+3.0	84	29	22	22†	45	1.25	-2.43	0.89	0	8	16	9	6	sw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

†† Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Inlaystown is Cream Ridge.

Daily precipitation for October, 1918.

Stations.	Watershed.	Day of month.																															Total.	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>The Highlands and Kittatinny Valley.</i>																																		
Belvidere.....	Delaware.....	*		*			.28	.37					.12								.15	.19									.60	1.71		
Charlotteburg.....	Passaic.....	.07		.26			.17	.30					*	.05							*	.19							.21		*	.31	1.56	
Culvers Lake.....	Delaware.....	.18	T.	.08			.28	.10					.06	T.							.11	T.						T.	.02	T.	.20	.42	1.45	
Dover.....	Passaic.....	.13					.20	.19					.10								*	.28					.01		.05		*	.51	1.47	
Layton.....	Delaware.....	.11	T.	.49			.38	.10					.08		.03						.14	.04					.06				.14	.60	2.17	
Newton.....	Delaware.....	.08		.12			.24	.15					.06	.02							.16	.02					T.				.14	.24	1.23	
Phillipsburg.....	do.....	.07	T.	T.			.30	.21					.07								.21									.04	.03	.10	1.03	
Sussex.....	Hudson.....																																	
<i>The Red Sandstone Plain.</i>																																		
Bergen Point.....	Coast.....	.56	T.				.11	.10	.06				T.								.05	.07								T.	.31	1.26		
Boonton ||.....	Passaic.....	.11		T.			.15	.12	.04					.09								.16								.01	T.	.30	0.98	
Chatham ||.....	do.....												*								*													
Elizabeth.....	Coast.....	.30					.07	.13					*	.06							*	.13						T.		.02		T.	.22	0.93
Flemington.....	Raritan.....	.16	T.				.34	.26					.07	.04							.07	.09						T.			T.	.51	1.54	
Highwood.....	Hackensack.....	.23		.01		T.	.12	.09					.19	T.	T.						.06							T.			T.	.26	0.96	
Jersey City**.....	Coast.....	.32		T.			.02	.21					.05								.06							T.			*	.30	0.96	
Lambertville.....	Delaware.....	.16	*	T.			.41	.15					.25									.43						T.		T.		.79	2.03	
Little Falls**.....	Passaic.....	.16	T.	T.			.14	.12					.11	T.							.09	T.							.05		.03	.22	0.92	
Newark**.....	Coast.....	.28	T.	.01			.10	.09					.01								.02	.09							T.		.01	.19	0.80	
New Brunswick.....	Raritan.....	.51		T.			.21	.08					.03	.05							.05	.03								.06	T.	.28	1.30	
Palisades Park.....	Hackensack.....	.28		.01			.09	.07					.18	.02					T.		*	.06						T.			T.	.26	0.97	
Paterson.....	Passaic.....	.08	T.	.02			.16	.10					.08	T.							.04	.05						T.		.01	T.	.25	0.79	
Plainfield**.....	Raritan.....																																	
Pompton Plains||.....	Passaic.....	.13					.15	.11	.04						.16							.13								.02	.04		.29	1.07
Somerville.....	Raritan.....	.27					.18	.26					.09								.09	.04									T.	.11	1.04	
South Orange.....	Rahway.....	.28		T.			.45	.17					.07								.07	T.						T.		.07	.11	.02	T.	1.24
New York, N. Y***.....	Coast.....	.14	T.	T.			.07	.10					.03		T.						.07									.01	T.	.41	0.83	
<i>The Southern Interior.</i>																																		
Bridgeton.....	Coast.....	.68					.32	.10					.05								.20											.43	1.78	
Burlington.....	Delaware.....	.15					.30	.08					T.								.09	.07										.44	1.13	
Clayton.....	Maurice.....	.17					.17	.24					.01									.05										.57	1.28	
Hammonton.....	Mullica.....	.24					.23	.22					.02		.01						*	.19							T.			.33	1.24	
Hightstown.....	Raritan.....																																	
Indian Mills.....	Mullica.....	.06					.22	.07					.02								.15	.07							T.			.44	1.03	
Lakehurst.....	Tooms.....	.05		T.			.21	.12					.01		T.						.12	.02										.35	0.88	
Lakewood.....	Metedeconk.....	.19	T.	T.			.11	.30					.03								.10	.04										.28	1.05	
Moorestown.....	Delaware.....	.28					.11	.05					T.								T.	.13										.55	1.12	
Northfield.....	Coast.....	.37					.02	.34					.05		.19						.04											.46	1.47	
Pleasantville.....	Coast.....	.21					.06	.10					.02	T.	.22						.07	.02										.42	1.12	
Trenton***.....	Delaware.....	.07	T.				.24	.02					.02		T.						.15								T.		T.	.24	0.74	
Tuckerton.....	Coast.....	.86					.76	.08					T.		.13						.05											.48	2.36	
Vineland.....	Maurice.....	.36		T.			.08	.34					.03		.05						.08											.30	1.24	
Woodbine.....	Coast.....																																	
Philadelphia, Pa.....	Delaware.....	.01					.10	.14					T.								.12										T.	.32	0.69	
<i>The Sea Coast.</i>																																		
Asbury Park.....	Coast.....	.30		.05			.18						T.								.10											.30	0.93	
Atlantic City***.....	do.....	.25					.20	.13					.03	.14							.03											.65	1.43	
Cape May City.....	do.....	.13					.04	.16					.08	.01	.21						.04											.89	1.56	
Long Branch**.....	do.....	.30	T.				.69	.30					.04								.07											.09	1.49	
Sandy Hook***.....	do.....	.10		T.			.05	.15					.01		T.						.08										T.	.35	0.74	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded.
|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.
* Precipitation included in the next following measurement. **Precipitation for 24-hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Hourly velocity.	Wind.			Moisture.		Sun- shine.
	Monthly mean.	Highest.	Date.	Lowest.	Date.		Highest.			Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	
							Miles per hour.	Direction.	Date.			
Atlantic City.....	30.15	30.54	19	29.63	31	7	27	ne.	18	81	77	59
Cape May City.....	30.16	30.51	19	29.74	13	8	29	se.	20			
Long Branch.....							72	nw.	6			
Newark.....							18	nw.	14	71*	62†	61
New York, N. Y.....	30.12	30.54	19	29.61	6	15	49	n.	18	76	66	69
Palisades Park.....	30.12	30.53	19	29.60	6							
Philadelphia, Pa.....	30.15	30.57	19	29.62	6	9	28	n.	7	79	81	60
Sandy Hook.....	30.13	30.57	19	29.59	6	14	47	nw.	14	79	75	67
Trenton.....	30.12	30.54	19	29.59	6	10	34	n.	18	81	70	65

§ Two directions and dates

* 7 a. m. † 9 p. m.

Daily temperatures for October, 1918.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.	
<i>The Highlands and Kittatinny Valley</i>																																	
Belvidere.....	Maximum	70	68	71	65	66	77	60	64	65	72	75	65	74	64	65	69	64	66	59	63	64	62	67	71	71	77	75	81	72	68	68.3 ^a	
	Minimum	46	47	52	36	43	42	33	34	37	42	42	41	44	35	36	37	45	31	32	41	32	30	30	49	54	55	52	61	65	50	42.5 ^a	
Charlotteburg.....	Maximum	61	66	67	68	65	69	64	66	64	70	75	68	69	71	60	69	63	57	57	60	55	65	62	60	65	68	67	65	78	70	65	65.5
	Minimum	35	29	50	30	35	57	38	30	25	32	37	42	47	44	37	32	32	27	24	44	22	22	34	40	49	52	46	60	63	56	39.0 ^a	
Dover.....	Maximum	60	65	69	64	67	76	56	61	65	68	74	62	72	61	58	65	58	55	62	58	61	63	63	67	69	72	69	78	71	68	65.3	
	Minimum	37	35	50	35	40	53	40	31	31	38	43	42	51	42	37	35	38	31	29	39	32	27	28	45	53	53	74	78	74	64	51	41.1
Layton.....	Maximum	64	67	69	66	64	78	63	68	64	73	76	65	72	67	58	75	70	64	59	56	58	64	64	65	68	69	70	73	78	70	68	66.7
	Minimum	35	33	54	32	43	59	40	30	31	34	38	42	51	39	31	33	36	42	27	30	45	28	25	25	49	52	57	54	63	50	44.3 ^a	
Newton.....	Maximum	64	66	69	65	65	75	64	63	63	69	74	68	71	65	69	69	69	62	58	59	59	61	61	63	68	69	70	73	78	70	68	66.7
	Minimum	36	40	45	45	45	58	38	32	31	45	45	52	45	38	40	41	36	32	33	34	33	34	31	31	50	55	56	64	64	43	44.2	
Phillipsburg.....	Maximum	64	71	71	66	66	79	61	64	67	73	76	62	74	63	61	72	71	58	60	60	59	61	60	66	70	71	76	74	80	72	70	67.7
	Minimum	41	42	52	38	46	57	41	35	34	39	45	50	52	41	37	39	43	40	34	36	43	35	31	31	50	55	56	64	64	43	44.2	
Snssex.....	Maximum																																
	Minimum																																
<i>The Red Sandstone Plain.</i>																																	
Bergen Point.....	Maximum	62	67	75	67	72	79	59	65	73	78	68	78	62	67	67	57	65	62	62	65	65	73	72	75	73	76	78	74	69	69.2 ^d		
	Minimum	47	41	57	40	47	57	43	42	38	42	52	54	49	48	47	49	37	48	36	36	35	49	50	54	58	59	59	59	59	59	47.3 ^b	
Boontonss.....	Maximum	67	67	73	68	67	78	58	68	67	74	75	63	73	63	61	73	66	58	60	64	58	62	63	65	68	70	74	71	73	72	69	67.0
	Minimum	36	34	45	33	38	46	40	33	28	30	38	42	49	43	39	34	36	43	35	26	30	29	25	26	39	45	52	49	53	59	60	39.2
Elizabeth.....	Maximum	66	71	77	70	72	81	65	66	71	75	79	74	78	71	64	73	68	62	59	66	64	64	66	67	73	72	77	77	82	76	73	70.8
	Minimum	41	38	55	37	43	61	43	33	33	38	44	50	54	44	33	38	43	48	33	32	44	33	30	30	42	52	52	54	59	64	63	44.0
Flemington.....	Maximum	68	70	73	70	69	80	73	68	73	76	79	74	78	73	68	75	72	72	68	64	62	67	64	71	72	73	76	75	78	74	71	71.8
	Minimum	42	39	58	36	43	60	43	37	33	40	45	50	53	46	37	38	45	47	35	30	44	38	30	30	47	53	52	55	59	66	59	44.8
Highwood.....	Maximum	60	66	71	64	70	78	59	62	65	68	77	65	76	63	65	70	65	58	56	64	60	58	63	63	70	70	73	72	77	74	70	66.8
	Minimum	43	36	56	35	42	59	42	30	32	35	41	51	54	40	34	37	40	40	30	30	45	29	27	28	44	50	52	55	61	62	55	42.6
Jersey City.....	Maximum	63	68	74	66	72	79	59	63	63	72	75	67	80	66	60	70	66	62	58	63	63	60	63	64	70	72	74	71	74	75	71	67.8
	Minimum	45	48	61	45	51	61	44	40	42	46	46	58	56	50	42	46	48	55	39	48	51	40	40	40	54	58	58	59	62	63	58	50.1
Lambertville.....	Maximum	64	68	72	62	68	74	65	60	63	68	73	65	75	63	61	70	65	60	57	65	61	61	63	61	70	72	74	72	77	77	70	66.8 ^b
	Minimum	41	41	61	37	47	61	43	34	33	40	45	53	55	45	35	41	48	47	35	34	46	34	31	31	50	55	55	57	63	66	54	45.7
Little Falls.....	Maximum	63	68	74	65	70	79	59	63	67	69	79	65	75	63	61	70	65	60	57	65	61	61	63	61	70	72	74	72	81	73	72	67.3 ^b
	Minimum	40	38	46	36	39	54	39	34	34	38	44	51	54	43	37	40	41	45	34	45	42	35	32	34	40	52	54	53	61	66	46	43.4 ^a
Newark.....	Maximum	64	70	72	68	71	78	61	65	67	72	77	66	76	64	62	73	64	60	56	61	60	62	63	62	70	69	71	70	73	72	69	67.4
	Minimum	46	47	52	44	49	61	42	40	43	46	52	56	55	46	43	47	48	44	39	40	46	42	40	41	50	56	56	59	62	64	48	48.5
New Brunswick.....	Maximum	68	70	73	67	75	77	64	60	67	71	76	70	76	69	61	71	67	59	55	64	64	60	61	65	73	73	74	75	80	76	70	68.7
	Minimum	44	40	61	40	45	61	42	38	31	43	46	53	55	46	38	42	47	45	34	32	49	37	32	33	46	54	55	55	61	64	61	46.2
Palisades Park.....	Maximum	64	68	73	67	70	80	57	65	65	72	78	66	78	63	61	73	64	56	57	65	62	62	64	64	60	71	75	72	77	75	72	67.9
	Minimum	37	37	46	36	46	54	37	33	32	37	42	52	53	39	37	40	42	38	32	34	36	30	28	30	49	52	53	57	61	63	42	42.1
Paterson.....	Maximum	67	70	75	70	75	82	69	68	72	75	80	70	78	72	63	75	67	62	61	64	63	65	67	66	70	73	76	72	80	76	74	70.9
	Minimum	42	40	59	42	46	59	43	37	38	44	49	52	54	46	40	44	44	51	38	34	46	39	35	36	45	53	57	53	58	62	59	46.6
Plainfield.....	Maximum																																
	Minimum																																
Somerville.....	Maximum	65	70	75	69	69	79	73	66	69	72	78	67	79	70	63	73	71	61	61	64	61	65	64	70	74	73	75	75	80	76	70	70.2
	Minimum	37	34	48	32	40	57	41	32	30	36	40	46	49	39	33	39	44	32	25	41	31	26	25	44	50	49	54	59	63	59	40.9	
South Orange.....	Maximum	59	66	71	63	68	76	60	60	64	67	73	65	74	61	58	69	64	60	54	63	59	59	60	60	70	70	71	70	73	69	65.5	
	Minimum	43	40	53	40	47	56	43	39	36	45	40	53	55	46	38	42	49	46	38	36	46	39	34	35	46	53	53	54	59	63	49	45.7
New York, N. Y.....	Maximum	63	67	72	67	68	75	60	62	63	69	75	66	74	62	61	70	64	60	57	60	59	59	64	63	67	71	72	68	69	73</		



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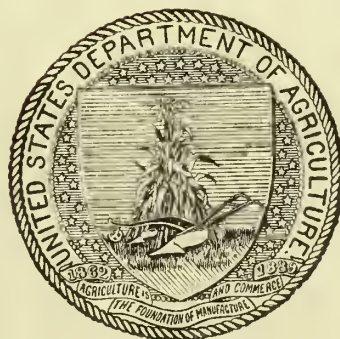
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WEATHER BUREAU
CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

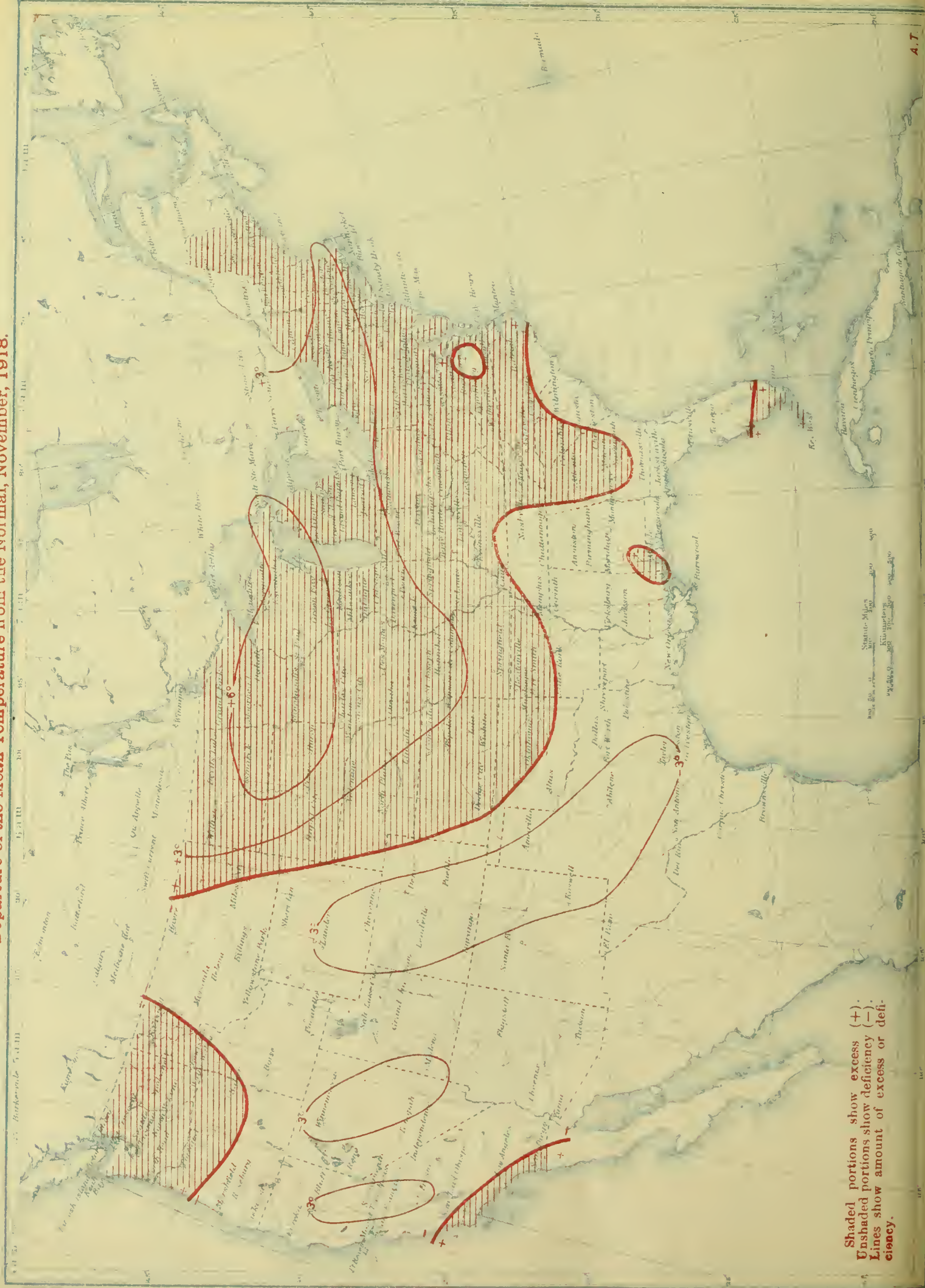
NOVEMBER, 1918.

BY
G. HAROLD NOYES
METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
DECEMBER 18 1918.

Departure of the Mean Temperature from the Normal, November, 1918.



Shaded portions show excess (+).
 Unshaded portions show deficiency (-).
 Lines show amount of excess or deficiency.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

VOL. XXIII. TRENTON, N. J., NOVEMBER, 1918. No. 11.

GENERAL SUMMARY.

The significant feature of November weather conditions in New Jersey in 1918, was the continuation of the rainfall deficiency. Except during the months of January, April and May the precipitation over the State has been subnormal, and the accumulated shortage for the year, thus far, is about 10 inches. The month was agreeably mild with the exception of a very few days, and the cold weather was scattered with moderate uniformity throughout the month. No such cold weather as made November a year ago such a notable month occurred and snow and the formation of ice was almost entirely absent. The lightest of flurries of snow were noted at only four stations in the northern counties on the 23d. There was a generous amount of clear sky, and the rains, though infrequent, were of somewhat regular occurrence. The third week of the month was notably warm, but other periods showed no marked deviation from the ordinary.

The mean stage of the Delaware River at Phillipsburg was 2.2 feet. At Trenton the mean daily stage was 1.2 feet, which was 0.5 foot below normal, and the monthly variation was less than a foot.

The temperature departure from the normal for the year 1918 to date, by sections, is: The Highlands, -0.2 ; Red Sandstone Plain, -0.1 ; Southern Interior, -0.1 ; Seacoast, -0.8 . The precipitation accumulated departure from the normal, for the year 1918 to date, by sections, is: The Highlands, -7.08 ; Red Sandstone Plain, -11.99 ; Southern Interior, -8.78 ; Seacoast, -10.28 .

Storm warnings were displayed along the coast on the 17th, 18th, 28th to 30th.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 35 stations was 43.9° , which was 1.1° above normal. The highest temperature was 71° at Bridgeton and Clayton on the 8th, and the lowest, 10° at Culvers Lake on the 27th. The greatest daily range of temperature was 44° at Somerville on the 15th. The highest monthly mean was 48.0° at Asbury Park, and the lowest, 39.4° at Charlotteburg. There were but few stations that showed a small negative departure from normal warmth.

PRECIPITATION.

The average total rainfall of the State, as deduced from observations of 41 stations, was 1.87 inches, which was 1.55 inches below normal. There was no snow, which was 1.7 inches less than normal. The greatest monthly amount of rain fell at Charlotteburg, amounting to 3.05 inches, and the least, 0.49 inch at Atlantic City. The greatest rainfall in any 24 consecu-

tive hours was 1.65 inches at Boonton on the 17th-18th. The average number of days on which 0.01 inch or more precipitation fell was 7, which was 1 less than normal.

WIND.

The prevailing wind direction was from the northwest, which was normal. The wind movement was approximately 12 miles per hour, or about normal. The highest velocity, sustained for 5 consecutive minutes, was 58 miles per hour from the southeast at Long Branch on the 28th.

SUNSHINE AND CLOUDINESS.

The average number of clear days throughout the State was 14, which was 2 more than normal; partly cloudy days, 6, or 3 below normal; cloudy, 10, or 1 more than normal. The approximate percent. of possible sunshine was 54, and was probably near normal.

MISCELLANEOUS.

Atmospheric pressure, reduced to sea level, averaged 30.06 inches, which was 0.04 inch below normal. The first killing frosts of autumn occurred at several stations in the Red Sandstone Plain and Southern Interior on the 6th, 7th, and at other more protected places, or near the coast, on the 11th, 24th, 25th and 26th. Fog occurred on the 7th, 10th, 17th and 28th. Thunder occurred in connection with the storm of the 17th-18th, and there was some sleet in Middlesex and Union counties on the 18th. Solar halos were observed on the 7th and 24th, and lunar halos on the 15th, 16th and 17th. The Aurora was observed on the 10th and 11th.

COMPARATIVE DATA FOR NOVEMBER.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more prec.
1885.....	44.8	76	18	4.53	7.90	2.72	.....	.....	.....	.....
1886.....	44.5	73	17	4.49	6.24	3.45	.....	.....	.....	.....
1887.....	41.5	72	13	1.94	2.60	0.95	.....	.....	.....	.....
1888.....	45.8	77	8	3.97	5.41	2.66	.....	.....	.....	.....
1889.....	45.7	69	13	8.48	11.45	4.70	.....	.....	.....	.....
1890.....	43.8	74	11	0.82	1.10	0.38	.....	.....	.....	.....
1891.....	42.2	70	6	2.39	3.47	1.54	12	10	8	4
1892.....	41.9	71	12	7.29	9.49	4.74	8	9	13	11
1893.....	41.8	70	11	3.48	4.53	2.19	10	11	9	7
1894.....	40.3	76	11	3.34	5.12	1.77	13	7	10	10
1895.....	45.7	80	12	3.17	5.10	1.56	12	7	11	10
1896.....	48.2	78	12	3.05	5.68	1.37	9	9	12	8
1897.....	43.8	74	10	4.59	5.95	2.42	8	11	11	12
1898.....	42.4	70	11	6.76	9.07	3.83	10	9	11	14
1899.....	44.0	71	17	2.29	4.32	0.72	15	8	7	7
1900.....	47.5	79	15	3.43	5.54	1.82	9	10	11	9
1901.....	38.5	69	10	2.38	4.23	1.18	12	9	9	6
1902.....	49.3	80	20	2.20	4.17	0.87	10	11	9	8
1903.....	39.9	79	3	1.26	2.03	0.75	16	8	6	6
1904.....	40.2	69	6	2.18	3.40	1.30	12	10	8	6
1905.....	42.1	70	6	1.84	2.86	0.54	12	10	8	6
1906.....	43.6	70	8	1.61	2.52	1.06	16	7	7	6
1907.....	43.5	68	13	5.65	6.95	4.19	10	8	12	13
1908.....	43.1	72	2	0.96	1.29	0.35	14	8	8	4
1909.....	46.4	80	17	2.36	4.33	1.32	13	8	9	8
1910.....	40.4	71	12	3.79	5.73	1.63	5	13	12	9
1911.....	41.3	73	13	5.17	6.50	3.17	8	11	11	10
1912.....	45.3	76	11	3.43	8.12	2.02	15	8	7	6
1913.....	46.2	77	19	2.71	4.89	1.00	14	7	9	7
1914.....	43.3	80	6	2.60	4.11	1.21	16	8	6	6
1915.....	44.0	75	16	1.69	3.81	0.96	14	8	8	8
1916.....	43.3	75	11	2.11	3.81	0.80	16	5	9	8
1917.....	39.8	68	2	0.66	1.15	0.18	19	5	6	3
1918.....	43.9	71	10	1.87	3.05	0.49	14	6	10	7

Climatological data for November, 1918.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.							Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted), in. or more.	Precipitation 40 in. or more.	Clear.	Pt. cloudy.	Cloudy.		
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	27	42.8	+1.6	68	8	18	27	34	1.98	-1.51	1.23	0	6	15	3	12	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	26	39.4 ^a	-1.1	63	8	12	27	41	3.05	-0.68	.....	0	8	17	7	6	w.	George S. Briggs.
Culvers Lake†.....	Sussex.....	848	17	.....	.....	.....	.....	.....	10	27	2.65	-0.17	1.52	T.	7	13	9	8	w.	Brice E. Riker.
Dover.....	Morris.....	600	34	40.9	+0.6	64	8	12	27	36	2.82	-0.81	.....	T.	10	12	7	11	.....	William C. Harris.
Layton.....	Sussex.....	480	18	41.1	+2.7	64	8†	14	27	38	2.69	-0.39	1.14	0	9	15	2	13	w.	A. M. Depue.
Newton.....	Sussex.....	769	37	40.6 ^a	+0.8	63	18	19	27	28	1.62	-1.32	1.04	T.	5	10	3	17	nw.	Irving G. Kern.
Phillipsburg.....	Warren.....	363	36	42.2	+0.6	66	8	22	27	31	1.95	-1.33	1.00	0	5	15	3	12	nw.	D. Wilson Smith.
Means and extremes.....				41.2	+0.9	68	8	10	27	41	2.39	-0.89	1.52	0	7	14	5	11	w.	
<i>The Red Sandstone Plain.</i>																				
Bergen Point†.....	Hudson.....	37	21	44.6 ^a	+1.6	68	18	26	24†	30	1.77	-1.81	1.05	0	7	.....	.....	nw.	William H. Mitchell.	
Boonton.....	Morris.....	400	§28	41.7	.....	67	8	14	27	40	2.53	-1.14	1.65	0	8	21	5	4	nw.	J. W. Demmers.
Chatham.....	Morris.....	330	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Paul Molitor.	
Elizabeth.....	Union.....	45	39	44.4	+0.8	70	18	20	27	33	1.90	-1.44	1.08	0	8	14	6	10	nw.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	30	44.5	+1.7	65	8†	22	27†	38	2.13	-1.22	1.04	0	9	14	7	9	nw.	Hiram E. Deats.
Highwood.....	Bergen.....	90	29	42.0	-0.3	66	18	17	27	36	2.28	-1.35	1.36	0	8	10	11	9	nw.	Charles J. Bates.
Jersey City.....	Hudson.....	10	19	46.0	+2.4	66	18	28	27	25	2.10	-1.30	1.15	T.	8	11	10	9	nw.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	31	42.0 ^b	-1.0	64	17†	20	27	29 ^c	2.16	-1.45	0.88	0	7	.....	.....	w.	Thomas R. Hunt.	
Little Falls.....	Passaic.....	180	§15	43.7	.....	69	18	19	26	34	2.09	-1.43	1.20	0	7	19	6	5	w.	Montclair Water Co.
Newark.....	Essex.....	159	76	44.2	+1.3	64	18	27	24†	25	1.88	-1.62	1.07	0	8	14	4	12	w.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	110	65	44.9	+1.3	69	1	23	27	33	2.17	-1.42	1.23	0	9	.....	.....	nw.	N. J. Experiment Station.	
Palisades Park.....	Bergen.....	80	3	42.0	.....	67	18	20	27	34	2.15	.....	1.39	0	8	12	7	11	nw.	George P. Kirsten.
Paterson.....	Passaic.....	80	47	45.6	+2.3	68	8†	23	27	32	2.17	-1.09	0.97	0	7	13	2	15	nw.	Marion T. Probert.
Pompton Plains.....	Morris.....	195	16	.....	0.0	.....	.....	.....	.....	.....	2.57	-0.92	1.46	0	7	.....	.....	.....	M. S. Taylor.	
Somerville.....	Somerset.....	60	36	42.2	.....	66	18	15	27	44	2.34	-1.05	0.81	0	7	13	7	10	nw.	A. A. Maedonald.
South Orange.....	Essex.....	200	48	44.0	+2.4	67	18	23	26†	28	2.71	-0.66	1.19	0	9	16	4	10	w.	Dr. W. J. Chandler.
New York, N. Y.....		365	48	45.7	+1.7	65	18	27	27	20	2.04	-1.40	1.36	0	7	10	9	11	nw.	U. S. Weather Bureau.
Means and extremes.....				43.7	+1.1	70	18	14	27	44	2.20	-1.28	1.65	0	8	14	6	10	nw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	37	45.2	+0.3	71	8	25	25	36	1.44	-1.82	0.67	0	4	18	2	10	nw.	Henry A. Jorden.
Burlington.....	Burlington.....	12	§32	45.2	+1.2	68	18	23	27	33	1.91	-1.83	0.81	0	7	18	4	8	nw.	D. S. B. McCoy.
Clayton.....	Gloucester.....	126	26	44.6 ^a	+1.2	71	8	23	24†	37	1.76	-1.77	0.84	0	8	18	2	10	nw.	Melvin F. Wills.
Hammonton.....	Atlantie.....	103	16	.....	.....	.....	.....	.....	.....	.....	1.36	-2.36	0.59	0	6	23	5	2	nw.	G. H. Parkhurst.
Hightstown.....	Mercer.....	120	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	G. Franklin Eldridge.	
Indian Mills.....	Burlington.....	76	29	44.0	+0.6	70	8†	17	27	40	1.55	-2.05	0.45	0	6	12	8	10	nw.	James M. Armstrong.
Lakehurst.....	Ocean.....	119	.....	43.0	.....	70	18	19	28	39	1.51	.....	0.63	0	5	10	11	9	w.	U. S. Proving Ground.
Lakewood.....	Ocean.....	54	15	43.0	-0.2	69	18	18	27	36	1.45	-2.20	0.42	0	7	12	4	14	nw.	R. W. Holman.
Moorestown.....	Burlington.....	75	56	44.8	+1.8	68	8†	22	27	33	1.56	-1.86	0.79	0	4	13	10	7	nw.	Geo. L. Gillingham.
Northfield.....	Atlantie.....	25	11	.....	.....	.....	.....	.....	.....	.....	0.72	-2.58	0.34	0	6	.....	.....	.....	William L. Flick.	
Pleasantville.....	Atlantie.....	26	20	.....	.....	.....	.....	.....	.....	.....	0.92	-2.44	0.41	0	5	17	4	9	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	47	44.8	+0.4	66	18	26	27	27	1.85	-1.58	1.27	0	5	12	7	11	w.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	25	45.0	+1.0	68	18	15	27	41	1.16	-2.30	0.55	0	5	7	19	4	nw.	Frank R. Austin.
Vineland.....	Cumberland.....	109	50	45.9	+2.0	70	8	23	24	34	0.98	-2.32	0.53	0	5	.....	.....	.....	H. C. Himes.	
Woodbine.....	Cape May.....	43	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Baron de Hirsch Agr. Sch.	
Philadelphia, Pa.....		117	48	47.6	+2.7	67	8	29	24	23	1.93	-1.13	1.16	0	5	12	8	10	n.	U. S. Weather Bureau.
Means and extremes.....				44.6	+0.9	71	8	15	27	41	1.40	-2.09	1.27	0	6	14	7	9	nw.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	29	48.0 ^b	+3.8	66	3	27	27	31	1.42	-1.85	0.53	0	7	14	6	10	w.	Miss Dorothy A. Alexander.
Atlantie City.....	Atlantie.....	16	45	46.6	+1.1	62	17	27	24	23	0.49	-2.74	0.22	0	5	13	7	10	nw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	34	47.6	+0.2	64	18	29	24	22	0.73	-2.49	0.24	0	7	12	10	8	nw.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	11	44.0	-0.3	61	15†	26	24†	39	3.01	-0.39	1.09	0	9	4	10	16	nw.	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	20	46.4	+1.9	63	18	30	27	19	1.37	-2.39	0.75	0	6	11	8	11	w.	U. S. Weather Bureau.
Means and extremes.....				46.5	+1.3	66	3	26	24†	39	1.40	-1.97	1.09	0	7	11	8	11	nw.	
For the State.....				43.9	+1.1	71	8	10	27	44	1.87	-1.55	1.65	0	7	14	6	10	nw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

†† Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Imlaystown is Cream Ridge.

Stations.	Watershed.	Day of month.																																Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>The Highlands and Kittatinny Valley.</i>																																		
Belvidere.....	Delaware.....				*	.10												.23	.23														1.94	
Charlotteburg.....	Passaic.....				*	.42					.05							* .190		.08													3.60	
Culvers Lake.....	Delaware.....				.02	.03				T *	.02							.52	.52				T.										2.65	
Dover.....	Passaic.....				*	.06					.05							* 2.00	*	.06			T.										2.82	
Layton.....	Delaware.....				.16	.04					.05							.76	1.14	.02	.02												2.69	
Newton.....	Delaware.....				.06						.02							.49	1.04	T.	T.			T.									1.62	
Phillipsburg.....	do.....				.09					T.								.42	1.00	.01	T.												1.95	
Sussex.....	Hudson.....																																	1.95
<i>The Red Sandstone Plain.</i>																																		
Bergen Point.....	Coast.....					.02					.08							1.05	.24	T.	.08			T.					*	.30			1.77	
Boonton |||.....	Passaic.....					.04	.01				.02							.01	1.65	.16	.04												2.53	
Chatham |.....	do.....																																	2.53
Elizabeth.....	Coast.....				*	.02					.06							*	1.15		.06								*	.61			1.90	
Flemington.....	Raritan.....	T.			.03	.03					.02							.42	1.04	.16	.03									.05	.35		2.13	
Highwood.....	Hackensack.....		T.		.09	T.					.04							.98	.38	.17	.06									.07	.49		2.28	
Jersey City**.....	Coast.....	T.			T.	.02			*		.09							1.15	.15	.07				T.						*	.62		2.10	
Lambertville.....	Delaware.....				T.	T.					.07							.72	*	.88	.05			T.						*	.44		2.16	
Little Falls**.....	Passaic.....				.05	.02				T.	.03							1.20	.25	.05	.03									.46				

‡ Separate dates of falls not recorded.

§ Incomplete or missing.

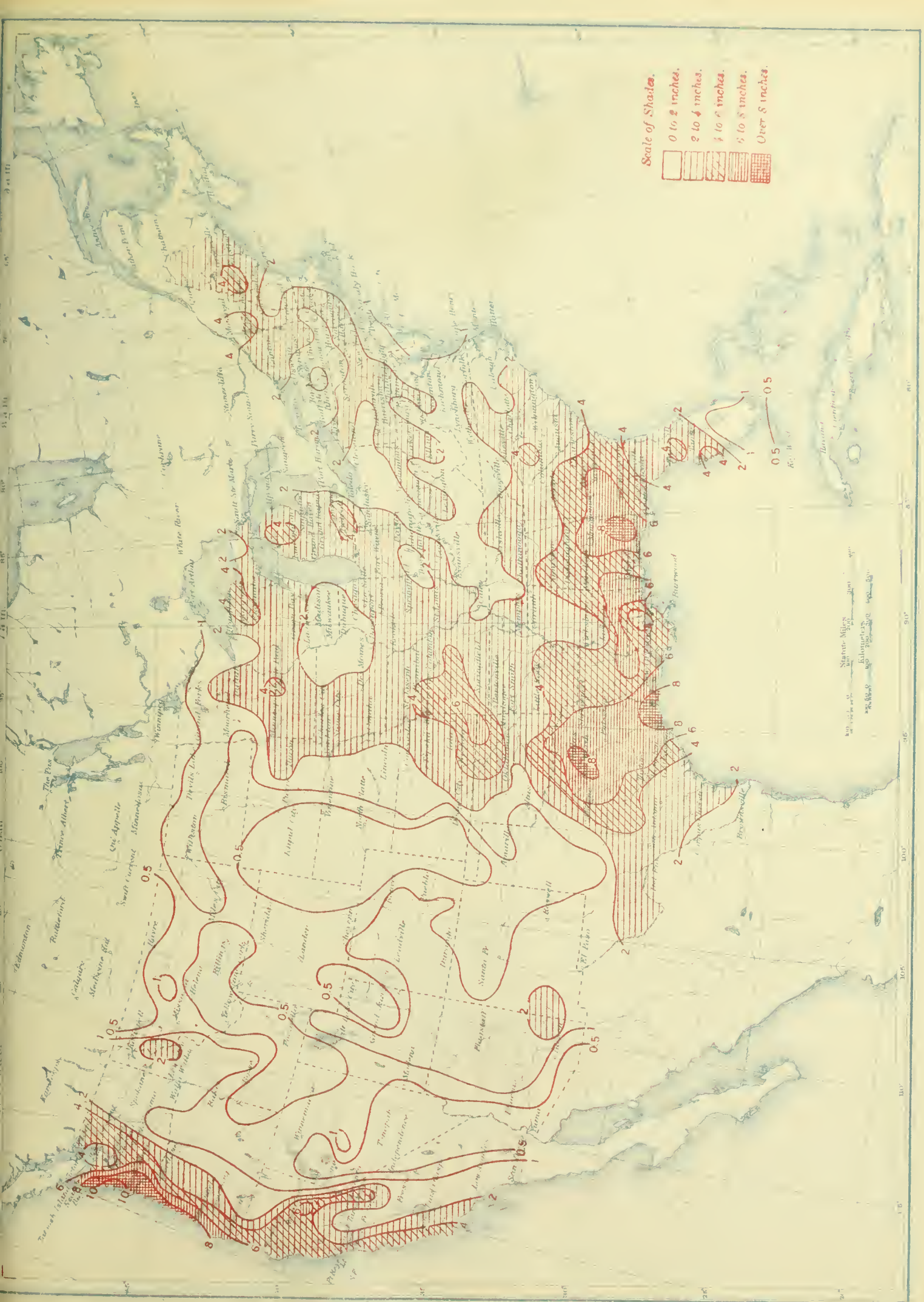
T. Trace, or less than 0.01 inch.

Stations.	Pressure.					Wind.			Moisture.		Sun- shine.	
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity. per cent. at 8 a. m.	Relative humidity. per cent. at 8 p. m.	
							Miles per hour.	Direction.	Date.			
Atlantic City.....	30.08	30.51	6	29.20	18	8	29	se.	28	78	73	55
Cape May City.....	30.09	30.51	6	29.42	18	10	40	se.	29			
Long Branch.....							58	se.	28			
Newark.....							12	s.	24	65*	58†	52
New York, N. Y.....	30.05	30.54	6	29.16	18	18	55	nw.	30	70	61	54
Palisades Park.....	30.05	30.55	6	29.15	18							
Philadelphia, Pa.....	30.08	30.56	6	29.20	18	10	28	ne.	5	75	81	51
Sandy Hook.....	30.05	30.55	6	29.13	18	18	52	s.	18	75	66	54
Trenton.....	30.05	30.56	6	29.16	18	11	38	w.	30	76	68	55

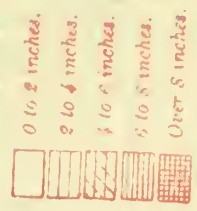
* 7 a. m. † 9 p. m.

Daily temperatures for November, 1918.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.		
<i>The Highlands and Kittatinny Valley.</i>																																		
Belvidere.....	Maximum...	57	49	58	49	52	55	57	68	58	60	55	55	50	50	60	59	60	66	50	53	45	49	42	39	46	40	46	40	46	45	52.3		
	Minimum...	40	31	30	35	43	27	24	34	44	46	26	31	30	27	24	31	42	54	46	38	38	36	32	23	25	27	18	22	39	32	33.2		
Charlotteburg.....	Maximum...	47	44	53	48	46	50	58	63	...	49	48	49	46	44	59	61	55	58	55	50	47	45	39	40	44	30	43	39	45	41	48.1 ^a		
	Minimum...	39	33	35	27	39	28	17	37	42	46	22	18	26	22	18	36	41	50	41	...	38	33	30	23	27	23	12	15	35	34	30.6 ^a		
Dover.....	Maximum...	56	50	54	50	50	51	58	64	53	58	49	49	48	49	...	63	61	62	52	48	45	44	38	41	44	35	43	46	51	42	50.1 ^a		
	Minimum...	37	32	33	31	35	29	22	39	47	38	25	21	27	27	25	39	41	48	42	38	39	33	29	24	27	21	12	20	40	31	31.7		
Layton.....	Maximum...	52	50	55	44	50	54	60	64	53	55	53	49	47	61	60	56	64	55	57	46	44	38	41	42	45	39	44	40	49	44	50.9		
	Minimum...	40	30	34	22	41	27	...	32	41	45	25	17	25	24	23	34	42	53	46	36	39	35	31	22	20	22	14	19	38	32	31.3 ^a		
Newton.....	Maximum...	51	48	53	50	48	50	56	60	54	55	47	49	47	57	50	60	63	52	48	44	44	37	40	43	38	43	23	24	19	25	38	28	32.1 ^b
	Minimum...	39	33	34	38	40	28	28	38	34	42	29	24	33	32	29	40	...	42	37	38	33	29	23	23	24	19	25	38	28	43	50.6		
Phillipsburg.....	Maximum...	50	49	55	49	50	53	57	66	56	55	50	53	48	49	59	58	64	64	52	48	44	45	42	39	44	37	45	46	47	43	50.6		
	Minimum...	38	34	32	38	35	30	28	37	45	39	29	25	32	32	28	34	48	48	42	39	38	35	30	26	29	25	22	25	38	33	33.8		
Sussex.....	Maximum...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Minimum...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
<i>The Red Sandstone Plain.</i>																																		
Bergen Point.....	Maximum...	56	53	47	55	52	51	57	63	57	64	50	54	51	53	60	63	61	68	57	51	49	...	42	42	46	38	...	42	50	47	52.8 ^b		
	Minimum...	44	34	36	38	42	35	31	38	48	44	34	30	34	33	30	42	48	53	46	39	40	36	32	26	27	27	26	42	34	...	36.5		
Boonton§§.....	Maximum...	54	50	57	49	52	55	57	67	56	59	51	54	51	50	60	61	65	63	54	50	46	48	40	43	46	37	40	52	50	44	...	52.3	
	Minimum...	40	34	33	29	39	27	20	29	42	48	24	19	27	26	20	35	38	50	47	36	40	36	32	27	27	14	18	24	33	...	31.1		
Elizabeth.....	Maximum...	64	63	57	54	52	51	58	65	58	63	51	52	52	53	60	62	59	70	59	51	48	49	42	42	46	42	40	45	54	47	...	53.9	
	Minimum...	43	33	33	33	42	30	26	36	44	49	28	25	34	28	27	39	46	58	47	39	42	37	34	25	26	27	20	22	42	32	...	34.9	
Flemington.....	Maximum...	63	52	59	55	51	57	59	65	60	60	52	53	55	55	63	59	61	65	57	52	47	52	46	44	48	44	48	42	53	47	...	54.1	
	Minimum...	43	36	35	33	43	33	26	38	43	48	28	23	32	29	25	32	48	57	47	40	38	37	35	25	29	30	22	22	37	33	...	34.9	
Highwood.....	Maximum...	56	56	55	53	49	49	55	64	58	60	48	49	50	51	61	59	60	66	55	51	48	48	42	42	46	38	46	48	53	46	...	52.3	
	Minimum...	40	28	31	32	36	26	21	34	41	37	21	19	29	27	25	39	40	52	49	38	41	36	29	23	23	22	17	20	41	33	...	32.0	
Jersey City.....	Maximum...	58	54	58	55	51	50	55	63	53	61	47	50	52	51	59	61	61	66	56	51	48	48	43	41	46	37	47	48	55	45	...	52.3	
	Minimum...	47	39	39	46	40	36	33	44	49	47	36	32	45	37	34	45	53	53	48	41	43	40	35	29	30	30	28	35	45	36	...	39.8	
Lambertville.....	Maximum...	55	50	52	50	51	49	53	62	57	57	47	48	50	50	...	64	63	69	58	52	49	46	41	42	45	39	44	43	55	46	...	50.3 ^b	
	Minimum...	37	35	32	35	...	27	24	37	45	45	26	20	37	30	26	...	44	50	46	39	38	36	34	24	32	28	20	22	42	34	...	33.8	
Little Falls.....	Maximum...	58	67	54	53	52	51	56	63	58	60	50	50	53	51	60	63	69	58	52	49	46	41	42	45	39	45	51	52	45	...	53.0		
	Minimum...	43	36	35	43	34	32	26	38	46	37	30	28	33	28	26	38	47	50	45	41	39	30	31	27	28	19	23	33	35	31	...	34.4	
Newark.....	Maximum...	52	49	55	53	39	39	56	63	55	55	48	49	49	49	58	60	61	64	53	49	46	47	39	40	45	35	45	51	52	43	...	50.8	
	Minimum...	41	37	39	40	40	35	33	44	49	41	36	32	40	39	33	44	50	48	43	40	41	35	31	27	30	29	27	29	40	34	...	37.6	
New Brunswick.....	Maximum...	69	51	53	54	51	50	56	62	58	60	50	49	52	51	61	61	62	68	56	52	48	47	42	43	45	39	45	52	57	46	...	53.0	
	Minimum...	44	35	33	38	44	33	27	41	45	49	32	29	40	33	28	41	48	55	47	39	40	37	34	25	31	30	23	25	43	34	...	36.8	
Palisades Park.....	Maximum...	56	52	56	54	51	50	56	66	57	61	48	50	50	50	61	60	64	67	56	51	50	48	42	42	45	36	45	53	52	45	...	52.5	
	Minimum...	34	30	31	35	29	23	35	43	34	22	21	30	26	27	41	48	47	42	39	38	35	26	25	24	21	20	21	38	33	...	31.6		
Paterson.....	Maximum...	59	54	59	52	51	54	60	68	57	63	52	54	51	52	63	60	59	68	58	52	50	47	47	49	40	37	...	53	47	...	54.1 ^a		
	Minimum...	45	36	39	35	44	33	28	38	46	50	33	28	33	34	31	40	48	57	47	40	42	39	33	28	30	29	23	28	40	36	...	37.1	
Plainfield.....	Maximum...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
	Minimum...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Somerville.....	Maximum...	60	51	56	51	50	55	59	64	58	60	53	53	52	52	63	62	62	66	56	53	47	49	41	41	47	40	46	41	52	47	...	52.9	
	Minimum...	40	31	30	28	41	29	22	34	36	45	24	18	30	24	19	30	45	52	46	37	38	36	32	24	24	25	15	17	40	29	...	31.4	
South Orange.....	Maximum...	53	51	53	53	49	49	51	62	56	58	47	47	50	49	58	59	62	60	55	48	47	40	40	44	38	44	49	54	45	...	51.4		
	Minimum...	41	37	38	38	37	33	29	41	44	42	31	32	36	35	30	41	50	50	50	47	40	37	30	28	30	23	23	30	43	35	...	36.6	
New York, N. Y.....	Maximum...	56	52	55	55	49	49	54	64	54	64	54	60	48	49	52	51	57	60	60	55	51	47	47	41	40	46	37						



Scale of Shading.



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WEATHER BUREAU

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CLIMATOLOGICAL DATA

NEW JERSEY SECTION

DECEMBER, 1918.

BY

G. HAROLD NOYES

METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
JANUARY 23 1919.

Departure of the Mean Temperature from the Normal, December, 1918.



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

VOL. XXIII. TRENTON, N. J., DECEMBER, 1918.

No. 12.

GENERAL SUMMARY.

The weather was remarkable during the closing month of 1918 throughout New Jersey for its high temperature and almost total absence of snow and ice. Since 1885 there have been but three warmer Decembers, viz; in 1889, 1911 and 1913. From the 12th to Christmas Day the warmth was continuously noticeable, on some days the temperature being as much as 20° above normal. The amount of sunshine and the quantity and frequency of rain were about normal. The coldest weather occurred at the close of the first week, and another cold period occurred from the 26th to the 30th. Farm work and other out-of-door enterprises were successfully carried on under the favoring conditions of the mild, open weather. Grass and grain made a substantial growth and looked unusually fine, and considerable plowing was done. The stock of ground water continues low, and there has been no accumulated excess of precipitation at any time during the year.

The mean stage of the Delaware River at Phillipsburg was 3.3 feet, the highest reading being 7.4 feet on the 26th. At Trenton the mean daily stage was 1.7 feet, which was 0.7 foot less than normal; the highest stage was 4.5 feet on the 25th and 26th.

The temperature departure from normal for the year 1918 to date, by sections is: The Highlands, +0.2°; Red Sandstone Plain, +0.3°; Southern Interior, +0.4°; Seacoast, -0.4°. The precipitation accumulated departure from normal for the year 1918, by sections is: The Highlands, -6.82; Red Sandstone Plain, -12.03; Southern Interior, -8.77; Seacoast, -10.47.

Storm warnings were displayed along the coast from the 4th to the 7th.

TEMPERATURE.

The monthly mean temperature, as deduced from observations of 34 stations, was 37.5°, which was 4.6° above normal. The highest temperature was 66° at Tuckerton on the 23d, and the lowest, 6° at Culvers Lake on the 7th. The greatest daily range of temperature was 37° at Charlotteburg on the 20th. The warmest station was Cape May City, and the coldest, Charlotteburg. At no station was the monthly mean below freezing, and every station was above normal in temperature.

PRECIPITATION.

The average total precipitation of the State, as deduced from observations of 38 stations, was 3.92 inches, which was 0.07 inch above normal. The average total snowfall was 0.5 inch, which was 5.8 below normal; this average depth ranged from 1.4 inches in the Highlands to 0.1 inch along the coast and in

the Southern Interior. The greatest monthly amount of precipitation was 4.94 inches at Long Branch, and the least, 3.21 at Paterson. The greatest precipitation accumulated in any 24 consecutive hours was 1.90 inches at Long Branch on the 22d. By far the greatest proportion of the precipitation occurred on the 11th and 22d, in fairly equal amounts. The average number of days on which 0.01 inch or more precipitation fell was 10, which was one more than normal.

WIND.

The prevailing wind direction was from the northwest, with an approximate velocity of 15 miles per hour, which is probably somewhat above normal. The highest velocity, sustained for 5 consecutive minutes, was 70 miles per hour from the northwest at Long Branch on the 6th.

SUNSHINE AND CLOUDINESS.

Total sunshine approximated 48 per cent. of the possible. The average number of clear days was 12, which was normal; partly cloudy, 7, or two less than normal; cloudy, 12, or two more than normal.

MISCELLANEOUS.

Atmospheric pressure, reduced to sea level, was 30.14 inches, which was 0.04 inch above normal. Dense fog occurred on the 11th, 13th, 14th, 15th, 21st, 24th, and 25th. Lunar halos were observed on the 1st, 12th, 15th, 16th, and 21st. Sleet occurred in northern districts on the 11th, and in the same section a thunderstorm occurred on the 14th.

COMPARATIVE DATA FOR DECEMBER.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more prec.
1885.....	35.3	60	6	3.15	4.33	2.47	.....	.....	.....	.....
1886.....	29.1	60	-2	3.51	4.65	1.62	.....	.....	.....	.....
1887.....	33.7	62	6	5.29	7.32	3.64	.....	.....	12	10
1888.....	34.9	65	5	3.69	4.95	2.05	.....	.....	.....	.....
1889.....	41.5	71	8	1.62	3.69	0.25	.....	.....	9	9
1890.....	30.9	56	3	3.89	5.74	2.34	11	10	10	8
1891.....	40.9	71	9	4.25	5.32	2.25	13	9	11	11
1892.....	30.4	68	1	1.87	3.09	1.30	.....	.....	10	10
1893.....	34.9	70	5	3.39	4.66	1.67	11	10	10	11
1894.....	34.8	66	-3	4.36	6.39	1.71	11	9	11	6
1895.....	37.2	70	3	2.61	5.42	0.85	11	9	8	4
1896.....	31.3	64	-15	1.43	2.70	0.85	14	9	12	11
1897.....	35.1	69	-3	4.90	6.44	3.07	8	11	12	11
1898.....	33.3	66	-2	3.53	4.85	2.38	12	10	9	7
1899.....	35.5	69	-1	2.11	4.30	1.29	14	10	7	6
1900.....	34.4	64	-2	2.59	3.97	1.47	14	10	7	6
1901.....	32.6	68	-8	7.30	9.45	4.87	12	9	10	11
1902.....	31.7	62	-11	7.23	8.99	5.81	13	7	11	13
1903.....	28.6	56	-13	4.08	5.49	3.20	14	9	8	9
1904.....	27.0	60	-15	3.19	5.38	2.06	10	7	14	12
1905.....	36.3	61	-5	3.65	5.60	2.58	14	8	9	7
1906.....	33.0	70	-5	3.99	6.18	2.70	9	8	14	13
1907.....	36.6	70	-3	4.91	7.13	3.55	12	8	11	9
1908.....	34.0	72	1	3.63	5.26	2.10	10	8	13	11
1909.....	29.8	60	-15	4.45	5.51	3.55	14	8	9	5
1910.....	26.5	58	-14	2.79	4.60	1.92	11	10	10	9
1911.....	38.4	70	-2	3.77	5.09	2.94	10	7	14	11
1912.....	36.9	68	-1	4.73	6.33	3.40	12	9	10	9
1913.....	37.7	63	-11	3.03	4.59	1.47	13	9	9	7
1914.....	31.1	66	-12	5.33	9.12	2.99	10	6	15	12
1915.....	31.9	64	-3	4.82	7.83	2.19	12	9	10	8
1916.....	32.3	70	-8	4.61	6.34	3.35	13	8	10	11
1917.....	24.8	54	-29	3.18	5.46	1.55	13	7	11	8
1918.....	37.5	66	6	3.92	4.94	3.21	12	7	12	10

Climatological data for December, 1918.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation 0.1 in. or more.	Clear.	Pt. cloudy.			Cloudy.
The Highlands and Kittatinny Valley.																				
Belvidere.....	Warren.....	289	27	35.0 ^a	+4.2	58	23	17	27†	25	4.54	+0.40	0.93	0.8	10	14	6	11		Samuel J. Hixson. George S. Briggs. Brice E. Riker. William C. Harris.
Charlotteburg.....	Passaic.....	719	26	32.2 ^b	+1.6	57	15	9	2	37	4.48	+0.09	1.40	1.0	6	17	7	7	nw.	
Culvers Lake†.....	Sussex.....	848	17	.....	.....	.....	.....	6	7	.....	3.89	+0.36	0.95	2.7	11	13	9	9	e.	
Dover.....	Morris.....	600	34	34.0	+3.9	58	14	12	7	27	4.80	+0.68	1.63	0.5	13	7	12	12	.....	
Layton.....	Sussex.....	480	18	33.0	+5.6	55	15	12	7	34	3.49	-0.68	1.07	2.0	8	10	4	17	ne.	A. M. Depue. Irving G. Kern. D. Wilson Smith.
Newton.....	Sussex.....	769	37	36.4	+7.1	59	15	14	7	25	3.97	+0.27	1.10	2.0	10	5	10	16	ne.	
Phillipsburg.....	Warren.....	363	36	35.2	+3.9	58	14	19	2†	23	4.40	+0.72	1.29	1.0	9	12	4	15	nw.	
Means and extremes...				34.3	+4.4	59	15	6	7	37	4.22	+0.26	1.63	1.4	10	11	8	12	ne.	
The Red Sandstone Plain.																				
Bergen Point††.....	Hudson.....	37	21	38.0 ^d	+5.0	65	23	20	7	24†	3.91	-0.08	0.99	T	9	4	16	11	nw.	William H. Mitchell. J. W. Demmers. Paul Molitor. L. B. Bonnett.
Boonton.....	Morris.....	400	28	33.8	.....	57	14†	11	28	34	4.13	+0.03	1.63	0.7	8	18	5	8	nw.	
Chatham.....	Morris.....	330	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Elizabeth.....	Union.....	45	39	37.7	+4.2	62	15	18	28	29	3.94	+0.15	1.17	0.5	11	13	5	13	nw.	
Flemington.....	Hunterdon.....	140	30	37.8	+5.8	62	15	20	7†	26	4.33	+0.65	1.02	T	11	15	5	11	w.	Hiram E. Deats. Charles J. Bates. S. K. Pearson, Jr. Thomas R. Hunt.
Hightwood.....	Bergen.....	90	29	35.2	+2.8	60	15	16	2	28	3.60	-0.56	1.15	0.8	10	9	8	14	nw.	
Jersey City.....	Hudson.....	10	19	38.9	+4.9	61	15	22	7	19	3.51	-0.05	1.08	0.6	10	13	7	11	nw.	
Lambertville.....	Hunterdon.....	80	31	37.9	+4.6	62	15	17	7	24	§	.....	1.71	T	§	§	§	§	n.	
Little Falls.....	Passaic.....	180	15	36.2 ^a		59	14†	19	6†	29	3.24	-0.60	1.10	0.5	8	14	7	10	nw.	Montclair Water Co. Prof. William Wiener. N. J. Experiment Station. George P. Kirsten.
Newark.....	Essex.....	159	76	36.6	+3.6	60	14	21	2†	22	4.02	+0.22	1.38	1.0	9	8	7	16	ne.	
New Brunswick.....	Middlesex.....	110	65	38.0	+4.9	64	15	20	2†	29	3.49	-0.26	0.89	T	10	14	7	10	nw.	
Palisades Park.....	Bergen.....	80	3	35.2	.....	60	14†	15	2	30	3.77	.....	1.22	0.9	9	13	3	15	nw.	
Paterson.....	Passaic.....	80	47	37.2	+4.1	58	23	21	7	25	3.21	-0.90	1.00	0.5	12	9	4	18	nw.	Marion T. Probert. M. S. Taylor A. A. Macdonald. Dr. W. J. Chandler.
Pompton Plains.....	Morris.....	195	16	.....	.....	.....	.....	.....	.....	.....	4.05	.....	1.43	1.0	7	.....	.....	.....	.....	
Somerville.....	Somerset.....	60	36	35.9	+4.0	63	15	12	28	36	4.13	+0.56	1.47	T	8	13	6	12	nw.	
South Orange.....	Essex.....	200	48	36.8	+4.8	60	15	20	7	25	4.20	+0.37	1.53	0.5	10	15	6	10	w.	
New York, N. Y.....		365	48	39.0	+4.6	61	14	21	6	22	3.70	+0.25	1.15	0.4	11	7	10	14	nw.	U. S. Weather Bureau.
Means and extremes...				36.8	+4.4	65	23	11	28	36	3.82	+0.04	1.71	0.5	9	12	7	12	nw.	
The Southern Interior.																				
Bridgeton.....	Cumberland.....	30	37	39.8	+4.2	62	9	20	27†	26	3.94	+0.07	1.00	T	12	11	8	12	ne.	Henry A. Jorden. D. S. B. McCoy. Melvin F. Wills. G. H. Parkhurst.
Burlington.....	Burlington.....	12	332	39.1	+5.0	64	15	19	28	23	4.52	+0.61	1.20	T	9	20	2	9	nw.	
Clayton.....	Gloucester.....	126	26	39.4	+5.4	64	15	18	30	24	4.19	+0.50	1.06	1.5	11	12	8	11	sw.	
Hammonton.....	Atlantic.....	103	16	.....	.....	.....	.....	.....	.....	.....	3.65	-0.45	1.22	T	9	19	4	8	n.	
Hightstown.....	Mercer.....	120	26																	G. Franklin Eldridge. James M. Armstrong. U. S. Proving Ground. R. W. Holman.
Indian Mills.....	Burlington.....	76	29	38.7	+4.7	64	14†	13	28	32	4.00	-0.09	1.30	T	11	10	10	11	nw.	
Lakehurst.....	Ocean.....	119	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Lakewood.....	Ocean.....	54	15	37.9	+4.1	65	8	14	28	30	3.47	-0.25	1.09	T	9	9	7	15	w.	
Moorestown.....	Burlington.....	75	56	39.0 ^a	+5.7	62	15	18	28	26	3.77	-0.19	1.10	T	11				n.	Geo. L. Gillingham. William L. Flick. Lincoln Van Gilder. U. S. Weather Bureau.
Northfield.....	Atlantic.....	25	11	.....	.....	.....	.....	.....	.....	.....	3.72	-0.12	0.99	T	11	.....	.....	.....	.....	
Pleasantville.....	Atlantic.....	26	20	.....	.....	.....	.....	.....	.....	.....	3.77	+0.10	1.02	.....	11	17	3	11	.....	
Trenton.....	Mercer.....	190	47	38.4	+4.0	64	14	22	30	20	3.86	+0.70	1.18	T	8	9	8	14	w.	
Tuckerton.....	Ocean.....	23	25	4.00	+5.5	66	23	13	28	30	4.08	-0.20	1.22	T	13	8	11	12	nw.	Frank R. Austin. H. C. Himes Baron de Hirsch Agr. Sch. U. S. Weather Bureau.
Vineland.....	Cumberland.....	109	50	40.8 ^a	+6.4	62	8†	20	27†	24	3.23	-0.61	1.09	T	11	17	5	9	sw.	
Woodbine.....	Cape May.....	43	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Philadelphia, Pa.....		117	48	40.9	+5.2	64	14	26	30	19	4.23	+1.19	1.24	T	8	11	6	14	nw.	
Means and extremes...				39.2	+5.0	66	23	13	28	32	3.85	+0.01	1.30	0.1	10	13	7	11	nw.	
The Sea Coast.																				
Asbury Park.....	Monmouth.....	22	29	40.2 ^b	+5.7	64	8	20	7	22	3.79	+0.15	1.22	T	9	15	5	11	w.	Miss Dorothy A. Alexander. U. S. Weather Bureau. U. S. Weather Bureau. William D. Martin, Jr. U. S. Weather Bureau.
Atlantic City.....	Atlantic.....	16	45	41.0	+4.6	62	9	23	30	22	4.02	+0.28	1.04	T	11	9	9	13	nw.	
Cape May City.....	Cape May.....	17	34	41.2	+3.2	62	9	26	27	21	3.55	-0.23	0.62	0.2	14	7	11	13	nw.	
Long Branch.....	Monmouth.....	25	11	37.9	+3.9	64	8	17	28†	26	4.94	+1.24	1.90	0.3	12	4	11	16	nw.	
Sandy Hook.....	Monmouth.....	22	20	39.3	+4.7	60	14	24	7	19	3.38	-0.47	1.29	T	8	10	10	11	w.	
Means and extremes...				39.9	+4.4	64	8	17	28†	26	3.94	+0.19	1.90	0.1	11	9	9	13	nw.	
For the State.....				37.5	+4.6	66	23	6	7	37	3.92	+0.07	1.90	0.5	10	12	7	12	nw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

†† Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Inlaystown is Cream Ridge.

Daily precipitation for December, 1918.

Stations.	Watershed.	Day of month.																															Total.	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>The Highlands and Kittatinny Valley.</i>																																		
Belvidere.....	Delaware.....						.13					.45	.42	.28	.32	.93							.65	.55	.35	.46							4.51	
Charlotteburg.....	Passaic.....	.15					.32					* .80	*		.15								* 1.40	* .66									4.89	
Culvers Lake.....	Delaware.....	T.		T.			.03					.48	.22	.17	.18	.95							.52	.73	.33	.27	.01	T.	T.			T.	3.89	
Dover.....	Passaic.....	T.		.02			.05					* 1.10	*	* 1.29									* 1.63	* .64	.02								.05	4.80
Layton.....	Delaware.....	T.			T.		.02					.56	.10	.15	.13	.64							.57	.50	.48	.34						T.	3.49	
Newton.....	Delaware.....			T.			.01					.64	.09	.17	.21	.85							.70	.40	.40	.46	.02					.02	3.97	
Phillipsburg.....	do.....		T.		T.		.02	T.				.96	T.	.18	.94	.14							1.29		.78	T.	.01					.08	4.40	
Sussex.....	Hudson.....																																	
<i>The Red Sandstone Plain.</i>																																		
Bergen Point.....	Coast.....	T.		.01		T.	.04			T.		*	.99	.48	.20	.44							.55	.50	.60	.15	T.						3.91	
Boonton III.....	Passaic.....											.05	.85	T.	.22	.90	T.						* 1.63		.43	T.	T.				T.		4.13	
Chatham II.....	do.....														*								*	1.17	*	.60	.02					T.	3.94	
Elizabeth.....	Coast.....			T.	T.		.04					*	1.12		*	.99							* 1.17	*	.60	.02						T.	3.94	
Flemington.....	Raritan.....			T.	T.		.02					.64	.38	.10	.18	.60							.76	1.02	.38	.23	.02	T.			T.		4.33	
Highwood.....	Hackensack.....	T.		.03	T.		.03		T.			.66	.22	.17	.15	.63							.59	.56	.41	.15	T.					T.	3.60	
Jersey City**.....	Coast.....	T.	T.	T.	T.	.04					*	1.02	.15	.09	.48							*	1.08	.63	T.	.02						T.	3.51	
Lambertville.....	Delaware.....				T.		.01					.86	.39	.13	.20	.71							.98	.73	.57	.08								
Little Falls**.....	Passaic.....	T.	T.	T.		T.						.85	.03	.17	.15	.51							1.10	T.	.40		T.					.03	3.24	
Newark**.....	Coast.....	T.	T.			.07						.92		.19	.51	.41							1.38		.50		.03	T.				.01	4.02	
New Brunswick.....	Raritan.....		T.	T.	T.		T.					.65	.59	.12	.15	.18							.89	.34	.17	.37	.03					T.	3.49	
Palisades Park.....	Hackensack.....						.05					.70	.17	*	.23	.81							1.22		.57		.02						3.77	
Paterson.....	Passaic.....	T.		.02	T.		.05		T.			.60	.20	.16	.12	.60							.42	.58	.35	.09	.02					T.	3.21	
Plainfield**.....	Raritan.....																																	
Pompton Plains†.....	Passaic.....						.06					.19	.81	T.	.26	.86								1.43		.44			T.				4.05	
Somerville.....	Raritan.....					T.						.72	.39	.13	.15	.75							.63	.84	.41	.08	T.		T.		T.		4.13	
South Orange.....	Rahway.....					.12						.90	.03	.18	.22	.48							1.53	.08	.55	T.	.11		T.		T.		4.20	
New York, N. Y***.....	Coast.....	T.	T.	T.	T.	.03	T.					1.07	.02	.18	.18	.33							1.15	T.	.67	.01	.03					.03	3.70	
<i>The Southern Interior.</i>																																		
Bridgeton.....	Coast.....		*	.04								*	1.00	.65	.12	.58	.15							.65	.35	.65		T.				.35	3.94	
Burlington.....	Delaware.....				T.							.72	.40	.10	.08	.75							.52	.68	.95	.29	T.					.03	4.52	
Clayton.....	Maurice.....						T.					1.06	.24	.06	.17	.81							.67	.32	.64	.16	.05					.01	4.19	
Hammonton.....	Mullica.....		T.									* .98	.05	.07	.49	T.							* 1.22	*	.82	.02							3.65	
Hightstown.....	Raritan.....																																	
Indian Mills.....	Mullica.....				T.							.55	.75	.08	.20	.47							.40	.68	.30	.50	.03					.04	4.00	
Lakehurst.....	Toms.....																																	
Lakewood.....	Metedeconk.....				T.		T.					.70	.39	.10	.13	.45							.30	.62	.48	.30	T.			T.		T.	3.47	
Moorestown.....	Delaware.....				T.		T.					.55	.43	.07	.06	.88							.36	.74	.19	.45	.02					.02	3.77	
Northfield.....	Coast.....		T.	.01								.40	.47	.02	.21	.63	.26						.27	.72	.39	.34	T.						3.72	
Pleasantville.....	Coast.....		.01	T.								.74	.15	.05	.19	.62	.30						.42	.60	.68	.01	T.					T.	3.77	
Trenton***.....	Delaware.....				T.		T.					1.18		.08	.32	.65							1.10	.01	.45		T.	T.	T.			.07	3.86	
Tuckerton.....	Coast.....			.10								.39	.83	.05	.08	.55	.24						.39	.53	.25	.52	.03					.12	4.08	
Vineland.....	Maurice.....			.01								*	1.09		.08	.50	.10						*	1.09	*		.36					T.	3.23	
Woodbine.....	Coast.....																																	
Philadelphia, Pa.....	Delaware.....				T.				T.			1.24		.05	.52	.74							.97		.59		.01		T.	T.		.11	4.23	
<i>The Sea Coast.</i>																																		
Asbury Park.....	Coast.....			.01		T.						1.22		.05	.05	.49							1.10		.85		.01					.01	3.79	
Atlantic City***.....	do.....		.03									.79		.14	.33	.62	.24						1.03	.01	.71		.01					.11	4.02	
Cape May City.....	do.....		.08	.02		T.						.26	.62	.20	.10	.10	.47	.51					.27	.34	.54	.02	.02			T.			3.55	
Long Branch**.....	do.....					.01	.02					.89	.09	.10	.03	1.07							1.90		.70		.03					.10	4.94	
Sandy Hook***.....	do.....				T.	T.						1.29	T.	.14	.15	.49							.68		.59		.02	T.	T.			.02	3.38	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded.

|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.

* Precipitation included in the next following measurement. ** Precipitation for 24-hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.				Moisture.		Sun- shine
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, per cent. at a. m.	Relative humidity, per cent. at 8 p. m.	Percentage of possible sunshine
							Miles per hour.	Direction.	Date.			
Atlantic City.....	30.15	30.70	19	29.59	25	8	38	ne.	17	83	76	49
Cape May City.....	30.16	30.71	19	29.66	24							
Long Branch.....							70	nw.	6			
Newark.....							36	nw.	6	68*	61†	39
New York, N. Y.....	30.13	30.74	19	29.55	4	18	75	nw.	6	71	64	50
Palisades Park.....	30.13	30.75	19	29.54	4							
Philadelphia, Pa.....	30.13	30.74	19	29.61	6	10	42	n.	6	81	82	43
Sandy Hook.....	30.13	30.74	19	29.54	25	17	57	nw.	6	78	73	51
Trenton.....	30.12	30.72	19	29.57	25	12	60	nw.	6	77	75	53

§ Two directions and dates

* 7 a. m. † 9 p. m.

Daily temperatures for December, 1918.

Stations.		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.
The Highlands and Kittatinny Valley																																	
Belvidere.....	Maximum...	36	39	40	46	39	40	33	48	53	37	34	48	40	46	52	46	47	46	44	45	45	52	58	47	49	39	35	36	39	38	43.2 ^a	
	Minimum...	25	18	...	26	27	28	18	32	32	25	19	31	32	38	45	36	28	25	20	20	27	30	38	29	30	29	17	17	19	18	21	26.7 ^a
Charlotteburg.....	Maximum...	...	35	41	39	34	...	28	53	48	29	31	45	40	50	57	41	40	43	38	53	45	50	48	49	45	37	33	32	32	36	43	41.2 ^b
	Minimum...	23	9	20	22	25	24	17	27	29	19	11	29	25	33	41	34	27	24	19	16	24	30	...	24	27	29	16	14	18	18	13	23.2 ^a
Dover.....	Maximum...	35	36	41	42	35	37	39	52	50	33	35	48	38	58	55	40	41	41	43	51	44	55	55	41	45	36	31	31	33	37	41	42.0
	Minimum...	22	15	29	26	27	18	12	38	33	18	18	32	35	38	38	34	28	25	19	21	30	34	31	28	35	27	19	19	20	18	18	26.0
Layton.....	Maximum...	36	39	41	43	35	39	34	53	50	38	30	43	35	40	55	40	43	48	44	50	46	52	54	43	48	39	35	32	33	39	38	41.5
	Minimum...	24	16	29	28	26	22	12	32	26	20	16	30	30	32	40	32	24	19	15	10	26	32	38	25	36	29	17	22	18	15	17	24.6
Newton.....	Maximum...	35	36	40	41	34	33	31	49	50	38	31	43	39	50	59	39	39	39	43	48	43	52	55	44	44	38	30	31	32	38	38	47.0
	Minimum...	22	16	28	28	21	19	14	31	38	19	15	31	31	26	38	34	26	22	20	23	35	35	42	32	33	27	19	20	18	17	22	25.9
Phillipsburg.....	Maximum...	35	40	44	41	39	41	37	50	52	37	36	47	42	58	54	40	42	44	40	45	43	56	55	41	45	36	32	32	34	37	40	42.4
	Minimum...	23	19	28	29	28	23	20	36	36	20	20	33	35	41	39	36	29	25	22	22	29	34	36	32	35	28	22	19	24	22	24	28.0
Sussex.....	Maximum...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Minimum...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
The Red Sandstone Plain.																																	
Bergen Point.....	Maximum...	37	42	47	47	47	43	42	52	52	41	43	50	46	60	63	45	45	45	...	...	54	65	48	50	...	36	36	37	40	49	46.7 ^d	
	Minimum...	27	24	29	31	30	25	20	...	...	25	24	32	36	40	42	38	32	28	28	30	37	31	35	...	26	22	26	22	...	25	29.4 ^e	
Boonton§§.....	Maximum...	33	40	43	45	39	42	38	51	51	34	33	49	42	57	57	42	43	47	44	52	45	55	56	44	47	36	32	34	35	40	43	43.5
	Minimum...	21	13	20	24	29	24	19	21	27	22	15	25	31	35	41	35	29	24	13	18	20	27	38	27	33	33	15	11	21	20	19	24.2
Elizabeth.....	Maximum...	40	41	46	46	41	42	35	50	53	44	37	51	43	51	62	49	45	45	42	51	46	52	59	50	49	42	34	35	37	39	49	45.4
	Minimum...	28	20	26	32	29	28	20	35	32	26	23	34	49	41	49	38	30	28	24	22	30	35	45	35	42	33	21	18	21	23	30.0	
Flemington.....	Maximum...	40	42	48	47	42	42	33	50	55	46	41	51	47	49	62	47	44	47	47	50	48	51	59	48	50	42	37	36	35	41	42	45.8
	Minimum...	29	21	29	29	28	29	20	33	29	28	22	34	34	40	47	39	33	29	23	23	29	34	45	32	39	33	20	25	21	24	29.7	
Highwood.....	Maximum...	36	39	44	46	39	41	34	46	51	39	35	48	40	51	60	43	45	42	41	48	48	54	56	44	48	40	34	34	35	39	46	43.4
	Minimum...	26	16	29	30	27	23	17	33	28	21	20	31	31	40	42	38	29	26	20	20	28	32	37	30	39	29	20	20	18	21	27.1	
Jersey City.....	Maximum...	36	42	45	46	42	45	39	50	51	41	42	48	44	58	61	45	45	42	40	49	48	53	57	48	49	40	33	35	36	39	47	45.0
	Minimum...	28	26	33	36	33	25	22	40	40	27	26	36	38	40	45	40	32	29	28	30	35	43	48	41	37	31	25	24	25	30	32.8	
Lambertville.....	Maximum...	37	41	47	43	38	44	36	57	52	42	35	46	42	57	62	41	43	47	39	44	44	55	57	43	47	38	...	...	...	...	...	45.4 ^e
	Minimum...	28	20	27	30	28	30	17	36	39	28	21	32	31	41	43	37	31	27	20	20	28	34	41	32	38	31	...	...	...	...	...	30.4 ^e
Little Falls.....	Maximum...	36	39	45	46	40	41	38	51	51	42	38	49	41	59	57	43	44	44	42	50	47	56	59	45	49	42	39	35	38	45	44.7	
	Minimum...	22	24	26	24	29	19	20	30	28	19	19	32	34	40	39	36	31	25	26	21	28	34	36	31	36	28	22	22	21	...	...	27.7 ^b
Newark.....	Maximum...	32	40	45	44	36	41	38	49	49	36	35	48	41	60	57	41	42	42	42	50	46	54	56	43	46	36	30	32	34	38	46	42.9
	Minimum...	24	21	33	35	29	21	21	37	36	23	23	36	37	39	40	36	31	28	26	28	36	38	42	37	36	28	23	24	23	23	28	30.4
New Brunswick.....	Maximum...	41	40	46	44	41	43	35	48	57	46	40	49	44	49	64	61	44	43	40	53	49	57	57	51	49	41	38	34	36	38	49	46.0
	Minimum...	29	20	29	34	29	29	20	29	31	26	22	34	36	36	45	39	32	27	26	24	31	37	43	36	40	32	26	21	24	21	23	30.0
Palisades Park.....	Maximum...	38	40	46	46	39	41	36	47	51	31	28	30	42	60	60	42	45	44	41	50	45	55	57	45	49	36	34	33	35	30	48	43.7
	Minimum...	22	15	26	33	26	18	17	34	28	20	22	32	34	42	41	36	29	23	19	20	32	34	34	30	36	25	18	18	20	19	22	26.6
Paterson.....	Maximum...	34	40	45	46	40	42	35	53	51	42	35	49	40	48	56	47	44	44	43	50	48	56	58	49	50	43	35	36	38	41	46	44.6
	Minimum...	28	20	29	31	30	27	21	33	31	24	22	34	36	33	45	39	33	27	24	25	31	36	41	33	40	33	24	24	22	23	26	29.8
Plainfield.....	Maximum...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Minimum...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Somerville.....	Maximum...	39	42	49	44	41	44	34	50	55	44	37	51	40	50	63	45	45	49	45	52	47	55	59	46	50	43	35	35	36	40	46	45.5
	Minimum...	28	17	20	23	27	27	18	28	28	26	19	32	28	39	43	37	30	27	22	16	26	32	41	27	38	30	15	12	23	19	17	26.3
South Orange.....	Maximum...	38	38	44	45	38	42	38	50	49	36	37	48	41	51	60	45	43	42	41	49	44	54	56	44	47	38	33	33	35	38	46	43.3
	Minimum...	25	21	30	32	29	22	20	37	36	24	22	35	37	40	45	37	35	28	27	24	37	36	40	38	37	29	21	21	23	22	26	30.2
New York, N. Y.....	Maximum...	36	42	46	47	38	43	40	54	52	37																						



Scale of Shades.

[White box]	0 to 2 inches
[Horizontal lines]	2 to 4 inches
[Diagonal lines \]	4 to 6 inches
[Diagonal lines /]	6 to 8 inches
[Cross-hatch]	Over 8 inches

Scale Miles
0 100 200
Kilometers
0 100 200

05
NJ

U. S. DEPARTMENT OF AGRICULTURE

WEATHER BUREAU

CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

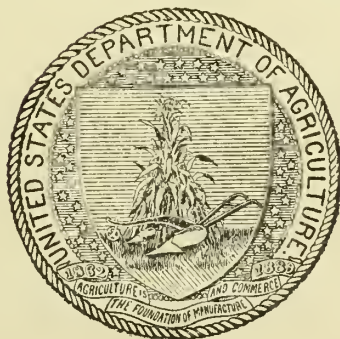
NEW JERSEY SECTION

JANUARY, 1919.

BY

G. HAROLD NOYES

METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
FEBRUARY 24, 1919.

Departure of the Mean Temperature from the Normal, January, 1919.



Shaded portions show excess (+).
 Unshaded portions show deficiency (-).
 Lines show amount of excess or deficiency.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

VOL. XXIV. TRENTON, N. J., JANUARY, 1919.

No. 1.

GENERAL SUMMARY.

The notably pleasant weather that prevailed over New Jersey in December, 1918, continued throughout January, 1919. Warm weather the first three days of the month was followed by sub-normal warmth through the 13th, and thereafter not a day was deficient in temperature. On the 3d, 4th, 6th and 8th snow flurries occurred, but the quantity was noticeably light, except that several inches fell in the northwestern part of Sussex County on the 3d. But on the whole, it was one of the least snowy Januaries on record. There was more clear weather than ever recorded in previous Januaries and a less number of days with measureable precipitation than in any January except in 1896. The mildness, while remarkable, was not unusual, as it averaged warmer in 1916, 1913, 1906, and several other years, but it was a most agreeable contrast with January, 1918, being 14° warmer.

The fine open weather has been especially favorable for outdoor occupations on the farms, such as hauling firewood, marketing potatoes, threshing and marketing grain, and, considering that it was the mid-winter month, a large amount of plowing was done. Small quantities of 5-inch and 6-inch ice were gathered. Grass and grain produced some growth during the latter half of the month, and presented a remarkably fine appearance. The ground was practically free from frost at the close of the month, and there was some swelling of leaf buds.

The mean stage of the Delaware River at Phillipsburg was 6.6 feet, the highest stage being 6.2 feet on the 4th. At Trenton, the mean daily stage was 3.0 feet, which was 0.9 foot below normal, the highest stage being 6.6 feet on the 15th.

Storm warnings were displayed along the coast from the 1st to the 4th, 8th to 10th, 18th, 23d and 24th.

TEMPERATURE.

The mean temperature of the State, as deduced from observations of 35 stations, was 34.1°, which was 4.3° above normal. The highest temperature, 62°, occurred at Bergen Point and Clayton on the 2d, and the lowest, 9° below zero, at Culvers Lake on the 5th and 12th. The greatest daily range of temperature was 41° at Indian Mills on the 13th. The warmest station was Cape May City and the coolest, Layton. At a few stations, in the extreme northern counties only, were mean temperatures below freezing, and at every station the means were from 2° to 5° or more above normal.

PRECIPITATION.

The mean total precipitation of the State, as deduced from observations of 38 stations was 3.51 inches, which was 0.28 inch below normal. The mean total snowfall was 1.3 inches, which was 7.4 inches less than normal. The snow cover ranged from nearly 8 inches in the extreme northwestern districts to a trace along portions of the eastern coast. The greatest monthly amount of precipitation was 4.44 inches at Atlantic City, and the least, 2.24 inches at Layton. The greatest precipitation

accumulated in any 24 consecutive hours, was 2.05 inches at Long Branch on the 23-24th. The mean of the number of days on which 0.01 inch or more precipitation occurred was 8, which was 3 fewer than normal.

WIND.

The prevailing wind direction was from the northwest, with an approximate velocity of 13 miles per hour, which is somewhat less than usual. The highest velocity, sustained for 5 consecutive minutes, was 74 miles per hour from the northwest at Long Branch on the 24th.

SUNSHINE AND CLOUDINESS.

Total hours of sunshine approximated 56 per cent. of the possible, and was considerably more than normal. The mean of the number of clear days throughout the State was 14, which was 4 more than normal; partly cloudy, 7, or 2 less than normal; cloudy, 10, or 2 less than normal.

MISCELLANEOUS.

Atmospheric pressure, reduced to sea level, was 30.06 inches, which was 0.05 inch below normal; highest readings occurred on the 12th, and lowest, at most stations on the 23d or 24th. A very brilliant meteor was observed on the 12th. Solar halos were observed on the 14th and 26th, and lunar halos on the 8th and 12th. High winds were commonly reported on the 10th and 24th. Dates of the occurrences of sleet were the 2d, 3d, and 8th in northern portions of the State only. Dense fog was commonly reported on the 21st, 22d, and 23d, and on the south-east coast on the 2d, 17th, 18th, and 19th.

ERRATA.

December, 1918.—Bridgeton; minimum temperature on the 14th, 46°, mean minimum temperature 31.9°, mean temperature 39.8°, and departure +4.2°, should read respectively, 45°, 31.8, 39.7, and +4.1°. Clayton; total snowfall 1.5 inches, should read 0.2 inch. Northfield, departure from normal precipitation -0.12 inch, should read -0.08 inch.

COMPARATIVE DATA FOR JANUARY.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more prec.
1885.....	30.8	67	0	4.08	5.41	3.33				
1886.....	27.3	60	-10	4.47	5.59	3.08				
1887.....	28.4	67	-6	3.86	6.65	2.00			12	10
1888.....	25.4	59	-12	4.77	6.74	2.80			12	9
1889.....	36.2	60	8	5.68	8.78	3.84			9	9
1890.....	41.3	78	12	2.29	3.22	1.05			11	10
1891.....	34.2	59	10	6.57	10.55	4.41	10	11	10	10
1892.....	29.9	67	-6	5.13	7.05	2.50	10	9	12	10
1893.....	21.6	54	-21	3.04	4.56	1.87	10	10	11	9
1894.....	34.2	61	-4	2.34	3.80	1.18	10	8	13	14
1895.....	28.1	64	-4	4.66	5.80	2.48	10	10	11	14
1896.....	28.6	61	-7	1.66	2.87	0.68	12	10	9	5
1897.....	29.0	64	-6	2.80	4.21	1.70	11	8	12	9
1898.....	32.6	64	-10	4.20	5.90	2.79	9	11	11	11
1899.....	30.1	60	-21	4.01	5.73	2.40	13	8	10	11
1900.....	32.4	64	-5	3.85	5.50	2.37	11	11	9	10
1901.....	30.4	63	-6	2.52	4.00	1.35	11	11	9	9
1902.....	28.4	58	-5	3.28	4.35	2.52	12	9	10	10
1903.....	30.4	57	-5	3.90	5.04	2.31	10	10	11	10
1904.....	23.3	58	-34	3.09	4.67	1.34	13	7	11	10
1905.....	27.0	60	-16	4.18	7.13	2.68	12	9	10	9
1906.....	36.5	74	-5	2.85	3.86	2.08	11	9	11	11
1907.....	31.8	71	-19	3.50	5.80	1.93	8	9	14	14
1908.....	31.8	60	-6	3.74	5.22	2.29	12	11	8	9
1909.....	33.2	69	-12	3.18	4.13	2.18	8	9	14	12
1910.....	29.7	54	-15	5.04	6.65	3.66	8	8	15	15
1911.....	33.5	63	0	3.44	5.34	1.97	10	7	14	14
1912.....	22.3	58	-32	2.82	4.62	1.73	8	12	11	13
1913.....	35.9	68	10	3.58	4.71	2.63	11	7	13	14
1914.....	31.9	73	-18	3.65	6.15	1.95	9	8	14	9
1915.....	33.5	61	-5	6.55	8.92	4.40	11	6	14	12
1916.....	35.1	74	-8	1.50	2.96	0.92	11	8	12	11
1917.....	31.4	58	-6	3.26	4.52	2.35	10	8	13	13
1918.....	20.3	56	-24	4.14	6.14	2.78	12	8	11	11
1919.....	34.1	62	-9	3.51	4.44	2.24	14	7	10	8

Climatological data for January, 1919.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.							Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation of in. or more.	Clear.	Pt. cloudy.	Cloudy.		
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	28	31.4	+3.9	57	2	4	5†	27 ^a	3.70	-0.05	0.87	3.7	7	17	4	10	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	27	30.0 ^b	+2.9	54°	1	1	11	30	3.03	-1.33	.....	.....	8	20	6	5	w.	George S. Briggs.
Culvers Lake††.....	Sussex.....	848	15	.....	.....	.....	.....	-9	5†	.....	2.79	-0.39	0.90	7.1	9	14	9	8	e.	Brice E. Riker.
Dover.....	Morris.....	600	35	31.2	+4.6	58	2	5	12†	27	3.58	-0.91	.....	0.4	7	5	20	6	.....	William C. Harris.
Layton.....	Sussex.....	480	19	29.8	+5.8	55	2	-7	5	34	2.24	-1.26	0.87	7.8	9	10	10	11	sw.	A. M. Depue.
Newton.....	Sussex.....	769	38	29.9	+4.2	56	1	0	10	30	3.77	+0.27	1.14	5.7	9	11	6	14	nw.	Irving G. Kern.
Phillipsburg.....	Warren.....	363	37	31.6	+3.7	58	1	5	5	26	3.40	-0.25	1.07	4.3	8	14	5	12	sw.	D. Wilson Smith.
Means and extremes.....				30.6	+4.2	58	1†	-9	5†	34	3.22	-0.56	1.14	4.8	8	13	9	9	sw.	
<i>The Red Sandstone Plain.</i>																				
Bergen Point††.....	Hudson.....	37	22	34.4 ^a	+4.2	62	2	9	10†	26	3.52	-0.96	1.12	0.5	7	11	15	5	nw.	William H. Mitchell.
Boonton.....	Morris.....	400	29	30.7	.....	58	1	4	12†	36	3.40	-0.80	1.05	1.2	9	23	4	4	nw.	J. W. Demmers.
Chatham.....	Morris.....	330	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Elizabeth.....	Union.....	45	40	31.5	+4.4	60	2	8	12	25	3.53	-0.57	1.20	1.0	8	13	8	10	w.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	31	34.1	+4.5	60	2	8	12	26	3.73	+0.26	1.02	1.0	9	14	8	9	w.	Hiram E. Deats.
Highwood.....	Bergen.....	90	30	32.6	+3.7	59	2	4	12	27	3.13	-0.94	0.94	0.8	7	12	6	13	nw.	Charles J. Bates.
Jersey City.....	Hudson.....	10	20	35.6	+4.8	61	2	11	10†	22	3.36	-0.50	1.27	0.5	8	10	12	9	nw.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	32	32.0 ^d	-1.6	.....	.....	7	12	24	3.53	-0.21	1.07	.....	8	13	6	12	n.	Thomas R. Hunt.
Little Falls.....	Passaic.....	180	16	34.2	.....	61	1	9	10	25	3.26	-0.60	1.03	.....	7	21	2	8	nw.	Montclair Water Co.
Newark.....	Essex.....	159	77	33.4	+3.8	58	1	8	12	26	3.07	-0.69	0.94	0.6	7	12	5	14	nw.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	110	66	34.4	+3.9	60	2	8	12	26	3.41	-0.40	1.14	1.0	7	14	11	6	nw.	N. J. Experiment Station.
Palisades Park.....	Bergen.....	80	4	32.5	.....	59	1†	5	12	27	3.41	.....	1.06	0.8	10	12	9	10	sw.	George P. Kirsten.
Paterson.....	Passaic.....	80	48	35.0	+5.6	61	2	9	19†	25	2.99	-1.07	0.90	0.5	7	8	4	19	nw.	Marion T. Probert.
Pompton Plains.....	Morris.....	195	17	.....	.....	.....	.....	.....	.....	.....	3.65	-0.74	1.14	1.0	8	.....	.....	.....	.....	M. S. Taylor.
Somerville.....	Somerset.....	60	37	33.0	+3.8	59	2	5	12†	30	3.47	-0.01	1.08	0.4	9	12	10	9	nw.	A. A. Macdonald.
South Orange.....	Essex.....	200	49	33.6	+4.9	59	1	9	10†	24	3.63	-0.51	1.28	0.3	7	15	7	9	w.	Dr. W. J. Chandler.
New York, N. Y.....		365	49	35.2	+5.0	60	1	9	10	27	3.35	-0.44	1.33	0.3	7	9	8	14	nw.	U. S. Weather Bureau.
Means and extremes.....				33.6	+4.1	62	2	4	12†	36	3.40	-0.55	1.28	0.7	8	14	8	9	nw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	38	36.5	+3.5	57	28	10	7	29	3.81	+0.07	1.35	1.0	9	20	4	7	w.	Henry A. Jorden.
Burlington.....	Burlington.....	12	§33	35.7	+4.9	60	2	9	12	28	3.72	+0.18	1.30	0.5	10	21	3	7	nw.	D. S. B. McCoy.
Camp Dix.....	Burlington.....	.....	1	36.0	.....	60	2	8	12	30	3.56	.....	1.35	T.	8	11	5	15	nw.	U. S. Army.
Clayton.....	Gloucester.....	126	27	35.8	-4.9	62	2	10	7†	30	4.06	+0.30	1.24	0.8	9	17	7	7	sw.	Melvin F. Wills.
Hammononton.....	Atlantic.....	103	17	.....	.....	.....	.....	.....	.....	.....	4.10	+0.15	1.29	0.3	7	20	5	6	sw.	G. H. Parkhurst.
Hightstown.....	Mercer.....	120	26	.....	.....	.....	.....	.....	.....	.....	3.93	+0.23	1.25	0.5	9	16	6	9	sw.	Rev. W. A. Stanton.
Indian Mills.....	Burlington.....	76	30	35.4	+4.0	60	2	4	12	41	3.93	+0.23	1.25	0.5	9	16	6	9	sw.	James M. Armstrong.
Lakewood.....	Ocean.....	54	16	34.4	+2.3	59	2	6	13	35	3.35	-0.43	1.21	T	7	14	3	14	sw.	R. W. Holman.
Moorestown.....	Burlington.....	75	57	35.3	+5.2	60	1†	8	12	30	3.02	-0.46	1.44	0.2	7	15	8	8	nw.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	12	.....	.....	.....	.....	.....	.....	.....	3.96	+0.45	1.51	0.5	8	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	21	.....	.....	.....	.....	.....	.....	.....	3.94	+0.54	1.50	.....	8	18	4	9	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	48	34.8	+4.3	60	1	9	12	26	3.28	+0.11	1.26	0.3	7	12	10	9	sw.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	26	36.0	+4.3	55	2	7	13	37	4.21	+0.55	1.78	T.	7	13	8	10	nw.	Frank R. Austin.
Vineland.....	Cumberland.....	109	51	36.6 ^b	+4.6	.....	.....	11	12	30	3.36	-0.41	1.33	1.0	9	.....	.....	.....	.....	H. C. Himes
Woodbine.....	Cape May.....	43	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Philadelphia, Pa.....		117	49	37.7	+5.9	61	1	13	12	26	3.35	-0.06	1.30	0.5	8	14	8	9	nw.	U. S. Weather Bureau.
Means and extremes.....				35.6	+4.2	62	2	4	12	41	3.72	+0.11	1.78	0.4	8	16	6	9	sw.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	30	38.9 ^c	+7.5	59	1	13†	12	29	.....	.....	.....	.....	.....	17	3	11	w.	Miss Dorothy A. Alexander.
Atlantic City.....	Atlantic.....	16	46	37.4	+4.9	54	1	12	12	25	4.44	+1.04	1.85	0.9	8	16	4	11	nw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	35	37.6	+3.5	55	2	12	12	22	3.54	+0.17	0.92	1.5	11	16	8	7	nw.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	12	32.9	+2.4	54	1†	7	5	27	4.07	-0.24	2.05	0.4	8	9	9	13	nw.	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	21	35.0	+5.3	58	1	12	10	23	2.94	-1.16	1.27	T.	8	14	6	11	w.	U. S. Weather Bureau.
Means and extremes.....				36.4	+4.7	59	1	7	5	29	3.75	-0.05	2.05	0.7	9	14	6	11	nw.	
For the State.....				34.1	+4.3	62	2	-9	5†	41	3.51	-0.28	2.05	1.3	8	14	7	10	nw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

†† Received too late to be included in the means.

Reference letters, ^a, ^b, ^c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Imlaystown is Cream Ridge.

Daily precipitation for January, 1919.

Stations.	Watershed.	Day of month.																															Total.	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>The Highlands and Kittatinny Valley.</i>																																		
Belvidere.....	Delaware.....	.65	.87	.81					.12										.15					.24	.86								3.70	
Charlotteburg.....	Passaic.....	* 1.04	.76				T.		.07						.10				.15					* .91								T.	3.63	
Culvers Lake.....	Delaware.....	.37	.68	.70			T.		T.	.01					T.	.03		.01	.09					.05	.85					T.		T.	2.79	
Dover.....	Passaic.....	* 2.15	*				T.		.36										.18				T.	* .89									3.58	
Dayton.....	Delaware.....	.38	.50	.87			.02		.03						.03			T.	.09					.13	.19								2.24	
Newton.....	Delaware.....	1.14	.71	.68	T.		.02		.03	.01					T.				.10					.20	.88					T.		T.	3.77	
Phillipsburg.....	do.....	.93	.63	.52	.02		.01		.05	T.					T.			T.	.17					1.07									3.40	
Russess.....	Hudson.....																																	
<i>The Red Sandstone Plain.</i>																																		
Bergen Point.....	Coast.....	.55	1.10	.65	T.				.05										.05					.86	.26					T.			3.52	
Boonton.....	Passaic.....	.40	.76	1.00	.01		T.	T.	.04	.01	T.					T.			.11	.02			T.	T.	1.05							T.	3.40	
Chatham.....	do.....	*	*	2.15	.01		T.		.09						T.			T.	.08					*	1.20									3.53
Elizabeth.....	Coast.....	.40	1.02	.91	T.		.02		.11						T.				.02	.11				.14	1.00					T.			3.73	
Flemington.....	Raritan.....		.94	.71	T.			T.	T.	.09	T.				T.			T.	.10					.29	.49					T.		T.	3.13	
Highwood.....	Hackensack.....	.51	.92	.71	T.		T.	T.	.09	T.					T.			T.	.10					* .91	1.15					T.		T.	3.26	
Jersey City**.....	Coast.....	.43	.35	1.27	.01				.06	T.					T.	.03		.02	.10						1.07					T.		T.	3.53	
Lambertville.....	Delaware.....	* .	* 2.26						.05	T.					T.				.06				.05	.98	.05								3.26	
Little Falls**.....	Passaic.....	.68	.87	.57	T.		T.		T.						T.				.06					.92	.02					T.			3.07	
Newark**.....	Coast.....	.63	.86	.47	T.		T.		.06						T.			T.	.11					.92	.02					T.			3.07	
New Brunswick.....	Raritan.....	.45	.87	.82	T.		T.		.07	T.					T.	T.		T.	.06					.03	1.11					T.		T.	3.41	
Palisades Park.....	Hackensack.....	.42	.91	.82	.01		.01	.01	.08	T.					T.			T.	.09					.01	1.05					T.		T.	3.41	
Paterson.....	Passaic.....	.42	.85	.64	T.		T.		.05	T.	T.				T.				.13					.07	.83					T.		T.	2.99	
Plainfield**.....	Raritan.....																																	
Pompton Plains.....	Passaic.....	.36	.83	1.04					.03	.08										.13	.04				1.14									3.65
Romerville.....	Raritan.....	.41	.88	.87	.02		.02		.01									T.	.18					.22	.86					T.		T.	3.47	
South Orange.....	Rahway.....	.75	.90	.48	T.		T.		.09						T.			T.	.13					.84	.44					T.		T.	3.63	
New York, N. Y***.....	Coast.....	.49	1.06	.38	T.		T.	T.	.06	T.					T.			T.	.09				T.	1.26	.01					T.		T.	3.35	
<i>The Southern Interior.</i>																																		
Bridgeton.....	Coast.....	.65	.64	.44			.10									.35		.23	.05					*	1.35								3.81	
Burlington.....	Delaware.....	.55	.73	.85	.02		.03		.04							.02		T.	.18				T.		* 1.30								3.72	
Camp Dix.....	Delaware.....	.52	.60	.81			T.		.04							.05		T.	.15					.01	1.35					T.			3.56	
Clayton.....	Maurice.....	.57	1.00	.62	T.		.05		.02							.09			.47					.58	.66								4.06	
Hammonton.....	Mullica.....	.70	1.00	.64			T.		T.							.11			.36					*	1.29								4.10	
Hightstown.....	Raritan.....																																	
Indian Mills.....	Mullica.....	.50	.92	.77			.05		.04		T.					.08		T.	.32					.40	.85								3.93	
Lakewood.....	Metedeconk.....	.55	.68	.70			T.		T.							.10		T.	.11					.27	.94					T.			3.25	
Moorestown.....	Delaware.....	.61	.76	T.			.02		.06							.04			.09					T.	1.44								3.02	
Northfield.....	Coast.....	.78	.82	.44			.03									.17		T.	.21					.58	.93								3.96	
Pleasantville.....	Coast.....	.76	.78	.46			.05		T.							.15		T.	.24					.92	.58								3.94	
Trenton***.....	Delaware.....	.54	.88	.53	T.		T.		.05	T.					.01			T.	.07					1.20						T.			3.28	
Tuckerton.....	Coast.....	.75	.85	.55			T.		.10							.20			.18					.05	1.73					T.			4.21	
Vineland.....	Maurice.....	* .	* 1.56				.10		.08	T.						.11		T.	.18					*	1.33			T.					3.26	
Woodbine.....	Coast.....																																	
Philadelphia, Pa.....	Delaware.....	.47	.99	.52	T.		.02		.04	T.	T.				.02	T.		T.	.12	T.			T.	1.17									3.35	
<i>The Sea Coast.</i>																																		
Asbury Park.....	Coast.....	*	1.35	.49					§							.02			.15					*	1.20					T.			§	
Atlantic City***.....	do.....	.79	.90	.43		.10									T.	.15		.01	.21				T.	1.85					T.				4.44	
Cape May City.....	do.....	.60	.92	.41	.03		.10								T.	.14		.02	.20					.76	.30		.06						3.54	
Long Branch**.....	do.....	.09	.90	.76			.03		.05	T.								T.	.19					1.96	.09					T.			4.07	
Sandy Hook**.....	do.....	.40	.73	.42	T.		T.		.02						T.	.01		T.	.09					1.26	.01					T.			2.94	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded.

‡ Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.

* Precipitation included in the next following measurement. ** Precipitation for 24-hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.			Moisture.		Sun- shine.	
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	Percentage of possible sunshine.
							Miles per hour.	Direction.	Date.			
Atlantic City.....	30.08	30.75	12	29.44	23	8	32	nw.	24	81	74	61
Cape May City.....	30.10	30.76	12	29.60	23							
Long Branch.....							74	nw.	24	67*	59†	46
Newark.....	30.04						40	nw.	24	67	64	50
New York, N. Y.....	30.04	30.74	12	29.44	24	19	84	nw.	24			
Palisades Park.....	30.03	30.76	12	29.42	24							
Philadelphia, Pa.....	30.10	30.77	12	29.56	18	11	41	nw.	10	80	79	57
Sandy Hook.....	30.05	30.76	12	29.42	24	17	58	w.	24	81	76	59
Trenton.....	30.04	30.73	12	29.19	24	12	46	nw.	24	76	71	64

§ Two directions and dates

* 7 a. m. † 9 p. m.

Daily temperatures for January, 1919.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.				
<i>The Highlands and Kittatinny Valley.</i>																																				
Belvidere.....	Maximum...	52	57	39	30	27	32	36	39	34	29	36	24	...	36	39	40	41	39	45	46	49	40	42	44	49	49	49	42	39	43	41	40.3 ^a			
	Minimum...	33	35	30	17	4	15	9	18	14	6	18	4	...	14	27	31	21	28	30	23	25	33	34	37	25	30	27	22	27	31	26	22.5			
Charlotteburg.....	Maximum...	54	...	36	30	25	...	34	37	35	23	...	22	...	31	41	39	42	45	40	43	45	40	39	37	41	47	43	41	34	41	37	37.9 ^c			
	Minimum...	34	36	29	14	6	13	7	17	16	3	17	4	...	21	31	25	29	25	32	22	23	31	37	34	22	25	28	21	25	29	29	22.1			
Dover.....	Maximum...	57	58	34	28	26	28	34	38	34	25	34	26	...	32	42	40	43	43	41	43	44	47	41	41	42	46	50	48	42	38	41	39	39.5		
	Minimum...	36	33	28	12	8	15	13	21	16	6	8	5	...	31	35	26	30	30	32	25	29	35	38	27	25	29	29	23	26	29	26	22.8			
Layton.....	Maximum...	48	55	38	32	24	32	30	40	35	31	35	25	...	31	40	41	48	49	42	39	43	47	40	40	44	46	50	46	40	43	43	39	39.9		
	Minimum...	33	35	30	14	-7	12	4	15	15	2	12	-1	...	17	33	17	22	25	22	18	22	31	34	32	23	26	23	20	27	31	25	19.8			
Newton.....	Maximum...	56	55	45	34	22	25	31	38	33	30	33	22	...	25	37	39	41	42	39	41	41	46	39	41	42	45	49	45	41	37	40	38	38.1		
	Minimum...	33	33	28	12	2	12	12	22	18	0	13	3	...	33	22	25	30	30	28	22	22	32	35	31	21	31	28	25	28	23	21	21.7			
Phillipsburg.....	Maximum...	58	56	39	28	23	28	36	39	34	27	36	22	...	30	38	39	41	45	39	44	45	50	42	43	44	49	51	48	41	38	43	42	39.9		
	Minimum...	35	32	28	11	5	13	10	20	14	8	11	6	...	7	17	31	26	27	31	31	25	35	36	32	26	33	31	25	30	31	29	23.3			
Sussex.....	Maximum...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
	Minimum...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
<i>The Red Sandstone Plain.</i>																																				
Bergen Point.....	Maximum...	60	62	37	34	28	28	40	41	35	35	...	28	...	36	38	43	45	46	43	46	46	44	45	49	47	49	55	46	41	45	46	42.8 ^a			
	Minimum...	39	37	22	17	13	19	20	22	24	34	35	...	13	28	32	32	30	28	32	34	26	28	37	39	30	...	33	29	...	31	31	30	26.1 ^b		
Boonton§§.....	Maximum...	58	46	37	22	29	30	37	40	34	35	...	28	...	32	43	41	45	45	44	44	44	48	43	46	42	49	51	48	42	39	42	40.7			
	Minimum...	23	36	31	19	8	11	12	13	14	7	...	8	...	22	22	23	25	32	23	23	23	25	34	35	24	26	23	22	25	30	30	20.7			
Elizabeth.....	Maximum...	58	60	41	35	28	30	38	41	37	33	...	29	...	32	43	44	45	46	43	47	47	44	43	43	45	49	52	50	46	42	43	42.6			
	Minimum...	40	41	33	21	11	20	18	24	22	14	...	8	...	16	22	36	25	30	32	33	24	27	36	39	35	24	33	29	24	30	28	30	26.4		
Flemington.....	Maximum...	57	60	45	37	28	33	38	41	35	33	...	28	...	31	41	45	45	43	47	47	45	42	42	42	44	50	52	50	44	40	44	45	42.5		
	Minimum...	35	38	33	18	11	18	16	25	15	4	...	3	...	10	23	8	10	18	35	25	27	31	32	27	26	35	35	38	27	32	30	24	30	32	25.7
Highwood.....	Maximum...	57	59	36	32	28	26	37	40	35	31	...	25	...	34	40	43	47	45	42	46	42	42	43	42	43	45	50	48	44	40	45	41	40.8		
	Minimum...	37	35	32	17	12	18	19	25	20	8	...	14	...	4	7	24	34	23	27	28	29	22	25	37	37	30	25	29	25	24	30	28	24.4		
Jersey City.....	Maximum...	57	61	40	32	29	30	38	40	36	28	...	34	...	41	40	43	47	45	45	46	47	43	44	41	45	46	43	51	50	44	43	44	41.8		
	Minimum...	44	40	32	20	15	20	25	31	28	11	...	17	...	15	28	36	25	33	33	37	30	32	40	41	32	27	35	35	32	34	33	32	29.5		
Lambertville.....	Maximum...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
	Minimum...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Little Falls.....	Maximum...	61	59	39	33	28	31	38	41	37	31	...	28	...	35	45	46	46	46	45	45	46	46	51	45	45	46	48	52	51	44	41	44	42	42.9	
	Minimum...	37	34	31	16	12	19	17	24	15	4	...	11	...	10	11	25	32	30	30	31	32	26	29	38	39	29	26	32	30	26	30	32	29	25.6	
Newark.....	Maximum...	58	57	35	31	25	26	37	39	34	28	...	30	...	27	32	40	40	44	45	42	43	45	41	42	42	43	46	50	49	43	39	42	40	40.0	
	Minimum...	39	34	31	16	13	19	23	29	16	4	...	10	...	8	14	27	32	35	34	29	32	36	30	29	25	36	32	32	31	30	32	26.8			
New Brunswick.....	Maximum...	59	60	45	36	28	29	38	41	33	34	...	38	...	25	36	45	41	44	46	43	46	44	44	43	44	45	44	45	48	46	41	43	43	42.2	
	Minimum...	36	39	34	18	11	19	17	22	22	1	...	19	...	8	10	23	35	26	31	30	33	26	29	36	38	36	27	34	33	25	30	29	33	26.7	
Palisades Park.....	Maximum...	59	59	34	30	23	36	37	38	35	25	...	38	...	26	34	41	42	46	44	41	46	43	42	43	44	42	46	54	48	44	40	43	40.8		
	Minimum...	37	34	30	17	12	19	17	25	18	4	...	11	...	5	7	25	30	24	30	30	21	26	37	38	27	25	28	26	23	29	31	28	24.2		
Paterson.....	Maximum...	60	61	39	34	28	29	38	41	37	34	...	38	...	25	36	43	44	49	46	44	47	48	46	43	42	45	50	52	50	45	44	46	42	42.8	
	Minimum...	37	38	33	21	13	19	20	28	22	4	...	20	...	9	12	25	35	27	30	31	30	26	28	36	38	35	26	32	31	29	33	32	27.1		
Plainfield.....	Maximum...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
	Minimum...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Somerville.....	Maximum...	56	59	45	36	31	34	40	41	37	34	...	40	...	28	35	41	43	46	46	44	47	48	44	45	46	46	49	51	50	44	41	45	44	43.0	
	Minimum...	35	37	32	17	9	17	11	20	17	9	...	20	...	5	15	34	22	24	28	30	21	20	32	35	37	25	27	29	19	25	28	27	22.9		
South Orange.....	Maximum...	59	58	39	32	26	28	36	40	35	29	...	36	...	26	32	44	42	44	45	43	44	43	44	44	45	50	48	43	40	42	41	40.8			
	Minimum...	38	35	31	16	12	19	20	27	22	9	...	12	...	9	13	25	33	27	32	35	34	27	30	37	40	30	25	34	30	27	32	31	29	26.4	
New York, N. Y.....	Maximum...	60	60	37	30	30	30	40</																												



Scale of Shades.

0 to 2 inches.
2 to 4 inches.
4 to 6 inches.
6 to 8 inches.
Over 8 inches.

Based on about 650 records.

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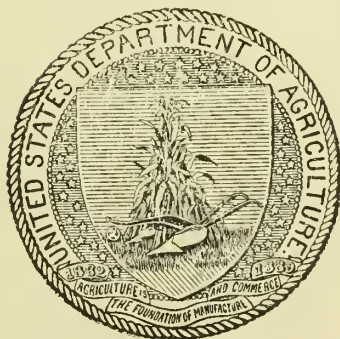
U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU
CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

FEBRUARY, 1919.

BY
G. HAROLD NOYES
METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
MARCH 22, 1919.

Departure of the Mean Temperature from the Normal, February, 1919.



Shaded portions show excess (+).
Unshaded portions show deficiency (-).
Lines show amount of excess or deficiency.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

VOL. XXIV. TRENTON, N. J., FEBRUARY, 1919.

No. 2.

GENERAL SUMMARY.

The persistent warmth of December and January continued with but little interruption through February, each of the three months averaging about 4° warmer than normal. This has made the winter one of the few conspicuously warm winters during the past fifty years or so. While there have been some few Februarys warmer than that of 1919, this ranks with the six mildest during the past 35 years. An outstanding feature which has contributed largely to the pleasantness of the weather was the almost total absence of snow; in but few districts of the northern highlands was there sufficient snow to require its removal. The precipitation, although mostly rain, was practically normal, but the amount of clear weather was agreeably greater than normal. There was but little frost in the ground in extreme northwestern districts at the close of the month, and none in other portions of the State, and plowing and other outdoor work was advantageously carried on. Ground was prepared for the planting of peas in extreme southern districts, and some onion sets were put out.

The mean stage of the Delaware River at Phillipsburg was 2.5 feet, and the extreme monthly range was less than two feet. At Trenton the mean daily stage was 1.8 feet, which was 1.9 feet below normal. The total monthly range of stage was less than two feet.

The temperature departure from the normal for the year 1919 to date, by sections, is, The Highlands, +4.4°; Red Sandstone Plain, +3.8°; Southern Interior, +3.8°; Sea Coast, +3.5°. The precipitation accumulated departure from normal for the year 1919 to date, by sections, is, The Highlands, -1.37 inches; Red Sandstone Plain, -1.10; Southern Interior, -0.35 inch; Sea Coast, +0.18 inch.

Storm warnings were displayed along the coast on the 4th, 13th, 15th, 22d, 25th and 28th.

TEMPERATURE.

The mean temperature of the State, as deduced from observations of 35 stations, was 33.6°, which was 3.5° above normal. The highest temperature, 65°, occurred at Bridgeton and Indian Mills on the 14th, and the lowest, 4°, at Culvers Lake on the 11th. The greatest daily range of temperature was 35° at Indian Mills on the 28th. The warmest station was Cape May City, with a mean temperature of 36.4°, and the coldest, Charlotteburg, 28.6°. At a few stations in the northern counties only, were the mean monthly temperatures below freezing. During the brief period from the 9th to the 12th the temperature was slightly subnormal, but thereafter the thermometer only occasionally passed below freezing.

PRECIPITATION.

The mean total precipitation of the State, as deduced from observations of 44 stations was 3.39 inches, which was 0.45 inch below normal. The mean total snowfall was 1.2 inches, which was 9.0 inches less than normal. The greatest depth of snow was 9.1 inches at Culvers Lake, and the least, a trace, at several stations. The greatest monthly amount of precipitation was 6.48 inches at Long Branch, and the least, 1.37 inches at Layton.

The greatest precipitation in any 24 consecutive hours was 2.00 inches at Long Branch on the 21st-22d. The mean of the number of days on which 0.01 inch or more precipitation occurred was 10, which was one more than normal.

WIND.

The prevailing wind direction was from the northwest, with an approximate velocity of 13 miles per hour, and was a little less than normal. The highest wind velocity, sustained for 5 consecutive minutes was 70 miles per hour from the northwest, at Long Branch on the 26th. High winds were also noted on the 1st, 2d, 16th, 18th and 19th.

SUNSHINE AND CLOUDINESS.

Total hours of sunshine approximated 61 per cent. of the possible, and was about normal. The mean of the number of clear days throughout the State was 15, which was 4 more than normal; partly cloudy, 4, which was 4 less than normal; cloudy, 9, which was normal.

MISCELLANEOUS.

Atmospheric pressure, reduced to sea level, was 30.00 inches, which was 0.10 inch below normal; highest readings occurred on the 20th, and the lowest on the night of the 14th-15th. Sleet occurred on the 4th, 8th, 21st and 22d. Lunar halos occurred on the 11th, 12th and 13th; solar halos on the 13th and 20th. Thunderstorms occurred on the night of the 14th-15th. The Aurora was observed on the 20th, and very generally on the 27th. Dense fog was observed on the 4th, 8th, 13th, 14th, 15th and 23d.

ERRATA.

January, 1919.—Bergen Point, departure from normal precipitation, -0.90, should read -0.90; Lambertville, departure from normal temperature, -1.6°, should read +1.6°; Little Falls, departure from normal precipitation, -0.60, should read -0.96; Paterson, date of lowest temperature, 19f, should read 10f; Clayton, departure from normal temperature, -4.9°, should read +4.9°.

COMPARATIVE DATA FOR FEBRUARY.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more prec.
1885.....	23.9	54	-2	3.93	5.85	1.44	.....	.....	.....	.....
1886.....	28.9	64	-10	5.42	8.00	4.13	.....	.....	.....	.....
1887.....	33.9	69	-6	5.24	6.74	4.13	.....	.....	.....	.....
1888.....	30.6	60	-5	3.53	6.01	2.04	.....	.....	.....	.....
1889.....	27.7	53	-3	2.49	3.80	1.65	.....	.....	.....	.....
1890.....	37.9	76	14	4.17	5.32	2.43	.....	.....	.....	.....
1891.....	38.0	71	1	5.11	7.20	3.70	6	9	13	10
1892.....	33.6	58	-7	1.63	3.62	0.67	7	9	13	7
1893.....	30.1	63	-1	5.73	8.90	3.14	7	8	13	11
1894.....	29.7	62	-11	4.42	6.17	3.25	9	8	11	11
1895.....	23.6	57	-12	1.28	2.34	0.55	13	9	6	5
1896.....	32.1	62	-12	6.77	10.06	4.82	9	9	11	12
1897.....	32.5	59	-6	3.61	6.37	2.38	8	10	10	8
1898.....	32.7	65	-15	3.48	5.45	1.55	12	7	9	9
1899.....	25.8	40	-17	6.06	8.77	3.78	10	6	12	15
1900.....	31.0	69	-6	5.30	7.88	3.27	9	9	10	10
1901.....	25.4	52	-6	0.94	1.65	0.69	15	9	4	4
1902.....	27.4	62	-7	6.24	8.44	4.29	12	6	10	9
1903.....	33.7	70	-16	4.87	6.60	3.74	12	8	8	10
1904.....	24.8	65	-16	2.45	3.09	1.36	13	8	8	8
1905.....	34.4	53	-18	2.53	3.96	0.70	14	7	7	7
1906.....	30.9	64	-12	2.58	3.85	1.77	14	7	7	7
1907.....	23.6	55	-22	2.67	3.90	1.82	14	7	7	8
1908.....	28.1	65	-17	4.79	7.44	2.85	10	10	9	9
1909.....	37.8	72	-2	4.96	6.78	3.55	6	10	12	12
1910.....	30.5	69	-11	3.08	4.81	1.06	10	9	9	10
1911.....	30.9	67	-12	2.78	4.06	1.76	8	7	13	11
1912.....	27.7	61	-14	2.49	3.12	1.68	11	12	6	5
1913.....	30.6	70	-5	2.49	3.21	1.48	16	6	6	7
1914.....	25.9	67	-17	2.85	4.94	1.89	12	7	9	9
1915.....	33.7	75	-2	5.37	7.28	2.97	11	6	11	8
1916.....	28.1	63	-18	4.21	6.17	2.84	10	6	13	11
1917.....	28.1	62	-17	1.95	2.80	0.92	10	9	9	11
1918.....	29.0	67	-23	2.08	3.41	1.03	12	8	8	7
1919.....	33.6	65	-4	3.39	6.48	1.37	15	4	9	10

Climatological data for February, 1919.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.							Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation, 40 in. or more.	Clear.	Pt. cloudy.	Cloudy.		
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	28	32.1	+4.7	50	3†	12	11	30	3.80	-0.52	1.17	1.0	9	17	2	9		Samuel J. Hixson. George S. Briggs. Brice E. Riker. William C. Harris.
Charlotteburg.....	Passaic.....	719	27	28.6	+2.3	49	3	12	11†	32	3.50	-1.16	0.95	2.0	9	16	6	6	w.	
Culvers Lake†.....	Sussex.....	848	18	.....	.....	.....	.....	.....	.....	.....	3.23	-0.12	1.40	9.1	11	16	2	10	e.	
Dover.....	Morris.....	600	35	30.9 ^b	+4.7	51	3	13	11	29	3.83	-0.41	1.08	1.5	9	13	6	9	.....	
Layton.....	Sussex.....	480	19	31.6	+7.5	52	3	14	10	33	1.37	-2.09	0.52	2.0	8	17	0	11	n.	A. M. Depue. Irving G. Kern. D. Wilson Smith.
Newton.....	Sussex.....	769	38	29.9	+4.2	48	3	9	19	25	2.98	-0.85	0.86	4.0	9	14	3	11	n.	
Phillipsburg.....	Warren.....	363	37	32.4	+4.6	50	28	14	11	26	3.30	-0.49	0.82	3.0	11	16	2	10	nw.	
Means and extremes...				30.9	+4.7	51	3	4	11	33	3.14	-0.81	1.40	3.2	9	16	3	9	n.	
<i>The Red Sandstone Plain.</i>																				
Bergen Point†.....	Hudson.....	37	22	34.0	+3.6	49	3	16	11	26	3.73	-0.66		0.5	6	11	11	6	nw.	William H. Mitchell. J. W. Demmers.
Boonton.....	Morris.....	400	\$29	31.2	.....	52	28	9	11	30	3.66	-0.55	0.96	1.1	9	16	2	10	nw.	
Chatham.....	Morris.....	330	17								3.72	-0.14								L. B. Bonnett.
Elizabeth.....	Union.....	45	40	34.4	+4.0	50	3†	12	11	30	3.74	-0.52	1.30	1.0	11	14	4	10	nw.	
Flemington.....	Hunterdon.....	140	31	35.0	+4.5	54	3	15	10	28	3.27	-0.12	1.00	1.8	9	18	1	9	nw.	Hiram E. Deats. Charles J. Bates. S. K. Pearson, Jr. Thomas R. Hunt.
Highwood.....	Bergen.....	90	30	32.3	+3.6	48	3	10	11	29	3.20	-1.33	1.13	1.0	9	14	3	11	nw.	
Jersey City.....	Hudson.....	10	20	35.0	+3.8	49	24	17	11	20	3.46	-0.48	1.22	0.7	10	14	6	8	nw.	
Lambertville.....	Hunterdon.....	80	32	32.8 ^b	+2.4	49	28	11 ^b	10	29	§	.....	1.00	1.0	11	14	3	11	n.	
Little Falls.....	Passaic.....	180	\$16	33.8 ^c		52	28	14	11	26	3.22	-1.07	0.98	0.2	10	15	3	10	nw.	Montclair Water Co. Prof. William Wiener. N. J. Experiment Station. Hackensack Water Co.
Newark.....	Essex.....	159	77	33.3	+3.5	50	3	17	11	24	3.44	-0.24	1.23	0.7	11	15	2	11	nw.	
New Brunswick.....	Middlesex.....	110	66	34.1	+2.8	53	28	16	11	27	3.60	-0.09	1.12	1.3	10	15	5	8	nw.	
New Milford.....	Bergen.....			.....	.....	.....	.....	.....	.....	.....	3.20	.....	1.09	.....	10	.....	.....	.....	.....	
Palisades Park.....	Bergen.....	80	4	32.4		50	28	10	11	28	3.46		1.13	2.2	12	15	4	9	nw.	George P. Kirsten. Marion T. Probert. M. S. Taylor Hackensack Water Co.
Paterson.....	Passaic.....	80	48	34.4	+4.2	53	3	16	11	29	3.17	-1.23	1.01	0.5	11	10	4	14	nw.	
Pompton Plains.....	Morris.....	195	17	.....	.....	.....	.....	.....	.....	.....	3.55	-0.88	0.98	T.	9	.....	.....	.....	.....	
Somerville.....	Somerset.....	60	37	32.6	+2.6	52	3†	10	11	32	3.30	-0.25	0.96	0.8	12	15	5	8	nw.	
South Orange.....	Essex.....	200	49	33.7	+4.7	48	28†	16	11	20	3.87	-0.15	1.27	1.2	10	16	2	10	w.	A. A. Macdonald. Dr. W. J. Chandler. U. S. Weather Bureau.
Woodcliff Lake.....	Bergen.....			.....	.....	.....	.....	.....	.....	.....	2.97	.....	0.90	.....	9	.....	.....	.....	.....	
New York, N. Y.....		365	49	34.7	+4.0	51	28	16	11	24	3.45	-0.29	1.28	0.7	11	12	4	12	nw.	
Means and extremes...				33.5	+3.6	53	3†	9	11	32	3.44	-0.55	1.30	0.9	10	14	4	10	nw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	38	36.3	+2.4	65	14	16	11	27	3.65	-0.45	0.85	0.5	11	16	0	12	nw.	Henry A. Jorden. D. S. B. McCoy. U. S. Army. Melvin F. Wills.
Burlington.....	Burlington.....	12	\$33	35.4	+4.5	60	28	16	11	34	3.51	-0.23	0.95	2.0	12	18	0	10	nw.	
Camp Dix.....	Burlington.....	1	1	35.6	.....	59	28†	15	11	29	2.93	.....	0.93	T.	9	15	4	9	nw.	
Clayton.....	Gloucester.....	126	27	.....	.....	61	28	16	11	32	2.97	-1.05	0.88	1.8	13	18	2	8	nw.	
Hammonton.....	Atlantic.....	103	17								3.29	-0.60	0.79	0.6	9	18	4	6	nw.	G. H. Parkhurst. Rev. W. A. Stanton. James M. Armstrong. R. W. Holman.
Hightstown.....	Mercer.....	120	26	34.4 ^a	+4.3	57	28	17	11	31	3.26	-0.48	0.92	0.5	11	12 ^a	6 ^a	9	nw.	
Indian Mills.....	Burlington.....	76	30	34.5	+2.4	65	14	11	11	35	3.30	-0.66	0.88	1.5	9	16	3	9	nw.	
Lakewood.....	Ocean.....	54	16	33.6	+3.8	59	28	14	11	30	3.45	-0.39	1.01	T.	10	14	3	11	nw.	
Moorestown.....	Burlington.....	75	57	35.0	+4.0	62	14	14	11	30	3.12	-0.51	0.89	0.7	9	15	5	8	nw.	Geo. L. Gillingham. William L. Flick. Lincoln Van Gilder. U. S. Weather Bureau.
Norfield.....	Atlantic.....	25	12	.....	.....	.....	.....	.....	.....	.....	3.25	-0.40	1.11	0.7	.....	.....	.....	.....	.....	
Pleasantville.....	Atlantic.....	26	21	.....	.....	.....	.....	.....	.....	.....	3.50	+0.20	1.20	.....	10	17	6	5	.....	
Trenton.....	Mercer.....	190	48	34.4	+3.7	58	28	17	11	27	3.25	+0.06	0.92	1.2	11	14	4	10	nw.	
Tuckerton.....	Ocean.....	23	26	34.2	+2.1	56	28	11	11	30	2.97	-0.82	0.97	1.0	9	14	7	7	nw.	Frank R. Austin. H. C. Himes
Vineland.....	Cumberland.....	109	51	35.6	+3.1	61	28	16	11	30	3.40	-0.65	1.28	T.	10	18	3	7	w.	
Woodbine.....	Cape May.....	43	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Philadelphia, Pa.....		117	49	37.6	+4.8	61	14	21	11	26	3.04	-0.34	1.13	1.0	11	15	3	10	nw.	
Means and extremes...				34.9	+3.4	65	14	11	11	35	3.27	-0.46	1.28	0.8	10	16	4	8	nw.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	30	33.8	+1.9	48	24	16	11	21	3.30	-0.53	1.00	0.1	10	17	2	9	w.	Miss Dorothy A. Alexander. U. S. Weather Bureau. U. S. Weather Bureau. William D. Martin, Jr. U. S. Weather Bureau.
Atlantic City.....	Atlantic.....	16	46	35.8	+2.8	51	24	19	11	20	3.22	-0.05	1.04	0.5	11	14	6	8	nw.	
Cape May City.....	Cape May.....	17	35	36.4	+2.3	50	14	21	11	16	2.50	-0.79	0.88	0.2	11	15	7	6	nw.	
Long Branch.....	Monmouth.....	25	12	32.6	+0.7	50	14	16	6†	21	6.48	+2.70	2.00	T.	11	11	6	11	nw.	
Sandy Hook.....	Monmouth.....	22	21	34.7	+4.0	49	28	20	11	17	3.41	-0.16	1.03	0.1	11	14	5	9	nw.	
Means and extremes...				34.5	+2.3	51	24	16	11†	21	3.78	+0.23	2.00	0.2	11	14	5	9	nw.	
For the State.....				33.6	+3.5	65	14	4	11	35	3.39	-0.45	2.00	1.2	10	15	4	9	nw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means. †† Received too late to be included in the means.

Reference letters, ^a, ^b, ^c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T. precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Imlaystown is Cream Ridge.

Daily precipitation for February, 1919.

Stations.	Watershed.	Day of month.																															Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
<i>The Highlands and Kittatinny Valley.</i>																																	
Belvidere.....	Delaware.....				.06	.08								*	1.17	.65			.05			*	.21	.70			.85		.03			3.40	
Charlotteburg.....	Passaic.....				.08				T.					*	* 1.67							*	* .80			*	.95					3.50	
Calvers Lake.....	Delaware.....				.01	.03			.01	T.		T.			.82	.58			.01			.11	.20	.58		T.	.87		.01			3.21	
Over.....	Passaic.....				.11									*	* 1.70							*	* .94			*	1.08		T.			3.42	
Dayton.....	Delaware.....				.03										.27	.09						.14	.02	.27		T.	.52		.03			1.37	
Newton.....	Delaware.....				.01	T.			.02			T.			.73	.59			T.			.03	.14	.58		T.	.86		.02			2.98	
Phillipsburg.....	do.....				.16				.06					.11	.81	.57			.04			.14	.10	.49		.41	.41		T.			3.30	
Sussex.....	Hudson.....																																
<i>The Red Sandstone Plain.</i>																																	
Bergen Point.....	Coast.....				T.					T.				T.	1.23	.38			T.			*	.22	*		T.	1.90					3.73	
Boonton III.....	Passaic.....				.09				.03					T.	.96	.63	.12		.01	T.			.18	.69	T.		.95					3.66	
Chatham II.....	do.....				.12				.04						.88	.48	.22		.02				.19	.65			1.12					3.72	
Elizabeth.....	Coast.....				* .10				.05	.04			T.		* 1.56				.02			*	.22	.67		*	1.12					3.74	
Flemington.....	Raritan.....				.06				.18						.90	.41	T.		.03			.04	.11	.54		T.	1.00					3.27	
Highwood.....	Hackensack.....				.06	T.			.06			T.			.76	.38			.01			T.	.20	.60		.20	.93		T.			3.20	
Jersey City**.....	Coast.....				.07				.05			T.			T. 1.05	.33			.04			.16	*	.54		*	1.22					3.46	
Lambertville.....	Delaware.....				.15	.02			.03					T.	.88	.48	.22		.02			*	.36	.59		.05	.95		T.			\$	
Little Falls**.....	Passaic.....				.08				.03						.05	.75	.38		T.			.20	.03	.72		.30	.68					3.22	
Newark**.....	Coast.....				.07				.05			T.			.06	1.17	.22		.02			.23	.05	.53		.58	.46		T.			3.44	
New Brunswick.....	Raritan.....	T.			.09	.03			.06	T.			T.		1.12	.40			.02			.10	.21	.61		T.	.96		T.			3.60	
New Milford.....	Hackensack.....				.05				.02						.05	.73	.36				.09	.11	.70		.50	.59						3.20	
Palisades Park.....	Hackensack.....				.09				.04				T.	*	.91	.34			.03			*	.20	.71		*	1.13		.01			3.46	
Paterson.....	Passaic.....				.03				.04				T.		1.00	.31			.02			.11	.07	.58		.01	1.00		T.			3.17	
Plainfield.....	Raritan.....																																
Pompton Plains I.....	Passaic.....				*	.04				.06					.78	.47	.08		.04				.48	.62		*	.98					3.55	
Summitville.....	Raritan.....				* .17				.07	.04					.83	.52			.06			.08	.13	.44		*	.96					3.30	
South Orange.....	Rahway.....				.13				.03				T.		T. 1.25	.39			.04			.21	*	.55		.28	.99					3.87	
Woodcliff Lake.....	Hackensack.....								.02						.06	.79	.46					.04	.13	.57		.31	.59					2.97	
New York, N. Y***.....	Coast.....				.09				.06	T.			T.	.07	.82	.32			.05			.15	.03	.58		.61	.67		T.			3.45	
<i>The Southern Interior.</i>																																	
Bridgeton.....	Coast.....				.08				.10				.05	*	1.22	.42			.05			.28	.60		*	.85						3.65	
Burlington.....	Delaware.....				.10	.03			.10					*	.95	.43			.08			.20	.11	.56		*	.95					3.51	
Camp Dix.....	Delaware.....				.08				.06						.74	.21			.04			.07	.20	.60			.93					2.93	
Clayton.....	Maurice.....				.11	.03			.03				.01	.03	.88	.20			.05			.24	.05	.57		.03	.74					2.97	
Farmington.....	Mullica.....				.04				T.				T.	*	1.18	.19			.04			.38		.67		*	.79					3.29	
Hightstown.....	Raritan.....				* .07				.06						.92	.30			.05			.11	.20	.63	.01		.91					3.25	
Indian Mills.....	Mullica.....				.10				.03					T.	.88	.30			.07			.12	.25	.75		T.	.80					3.30	
Lakewood.....	Metedeconk.....				.02				.10					T.	.94	.20			.02			.15	.37	.64		.03	.98		T.			3.45	
Moorestown.....	Delaware.....				.09				.06						.89	.40			T.			.08	.14	.60		.03	.83					3.12	
Northfield.....	Coast.....				.03				.02						1.11	.30			.04			.16	.31	.73		T.	.55					3.25	
Pleasantville.....	Coast.....				.03				.01					T.	1.20	.26			.10			.39	.15	.73		.12	.51					3.50	
Trenton***.....	Delaware.....				.09				.07	T.					.22	.87	.14		.06			.24	.07	.58		.62	.29		T.			3.25	
Wickertown.....	Coast.....				T.				.03						.97	.20			.10			.10	.47	.40		*	.70					2.97	
Wineland.....	Maurice.....				.07				.04				.02		1.28	.16			*			.27	.11	.65	T.	T.	.80	T.				3.40	
Woodbine.....	Coast.....																																
Philadelphia, Pa.....	Delaware.....				.14				.05	T.			T.	.26	.61	.10			.05			.18	.10	.42		.86	.27		T.			3.04	
<i>The Sea Coast.</i>																																	
Asbury Park.....	Coast.....				.03				.01						.93	.22			T.			*	.51	.58		*	1.00		.02			3.30	
Atlantic City***.....	do.....				.05				.03					T.	.29	.82	.28		.04			.53	.24	.47		.46	.01		T.			3.22	
Cape May City.....	do.....				.05	T.			.01				.01		.06	.82	.26		T.			.22	.04	.57		.09	.37					2.80	
Long Branch**.....	do.....				.06				.06					T.	.16	.80	.60		.10			1.70	.30	1.50		.70	.50					6.48	
Sandy Hook**.....	do.....				.07				.04					T.	.12	.84	.26		.01			.30	.05	.69		.49	.54		T.			3.41	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded.

|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.

* Precipitation included in the next following measurement. **Precipitation for 24-hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.			Moisture.		Sun- shine	
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity. per cent. at 8 a. m.	Relative humidity. per cent. at 8 p. m.	Percentage of possible sunshine
							Miles per hour.	Direction.	Date.			
Atlantic City.....	30.01	30.48	20	29.30	14	8	24	se.	25	78	73	60
Cape May City.....	30.03	30.51	20	29.32	14	11	37	nw.	26			
Long Branch.....							70	nw.	26			
Newark.....							40	nw.	19	67*	60†	57
New York, N. Y.....	29.97	30.44	20	29.27	15	20	66	nw.	26	64	60	61
Palisades Park.....	29.97	30.45	20	29.25	15							
Philadelphia, Pa.....	30.03	30.50	20	29.30	15	11	32	n.	26	77	67	62
Sandy Hook.....	29.98	30.47	20	29.28	14	15	60	nw.	26	76	73	65
Trenton.....	29.98	30.47	20	29.28	15	12	40	nw.	16	74	70	62

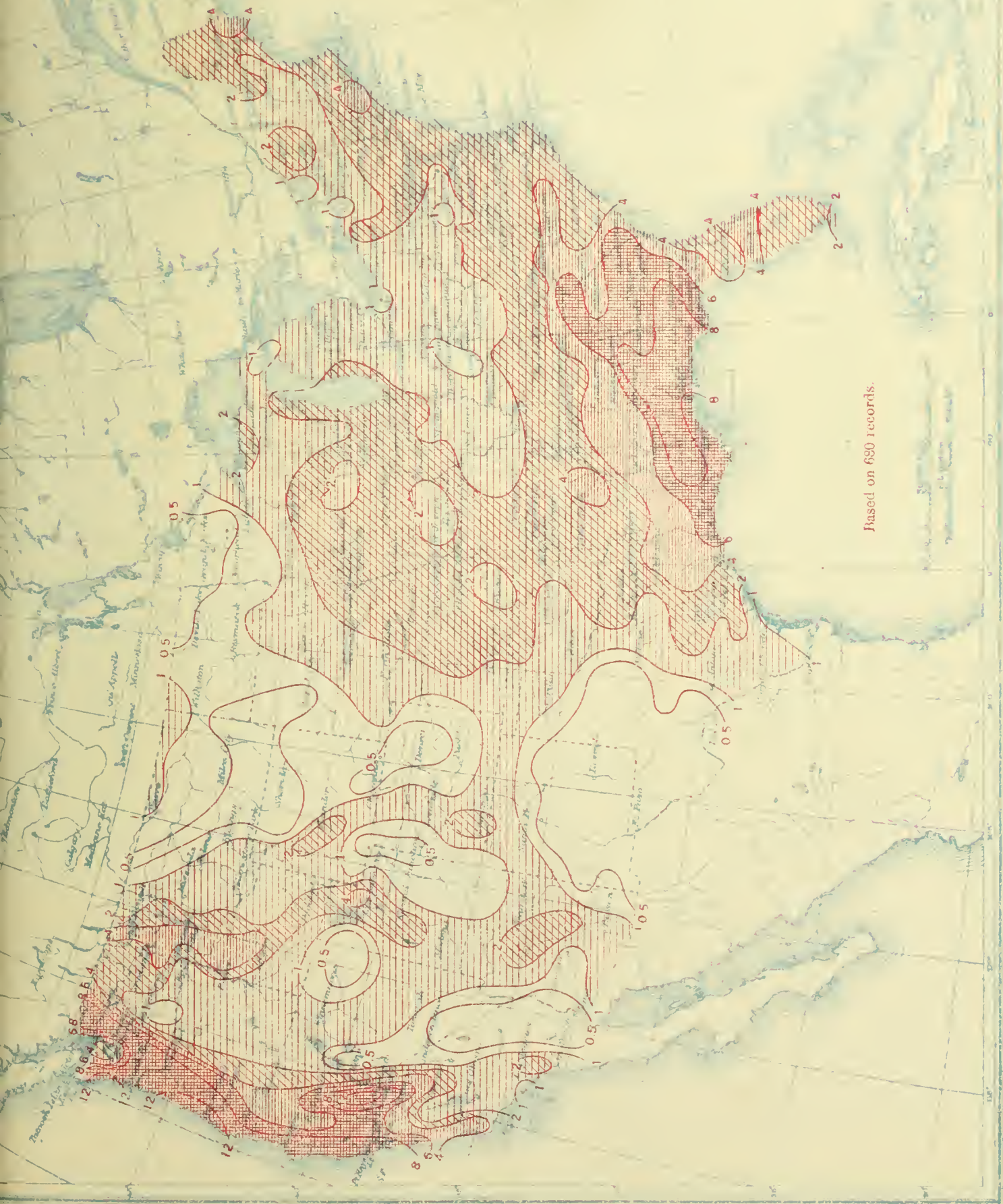
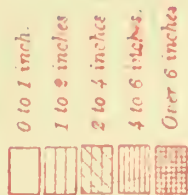
§ Two directions and dates

*

Daily temperatures for February, 1919.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.
<i>The Highlands and Kittatinny Valley</i>																																
Belvidere.....	Maximum...	36	41	50	36	42	38	40	33	38	39	39	35	50	42	42	41	40	38	38	49	39	38	43	49	41	38	34	46	.....	40.5	
	Minimum....	25	22	22	26	28	19	19	22	22	17	12	18	20	...	35	30	24	28	20	23	22	24	32	34	26	27	19	24	.....	23.7 ^a	
Charlotteburg.....	Maximum...	28	35	49	35	35	32	37	34	29	27	35	33	43	41	40	...	34	34	29	40	30	33	39	38	37	34	38	39	.....	35.5 ^a	
	Minimum....	21	21	17	19	29	16	19	14	20	12	12	16	21	32	32	29	22	24	18	20	23	29	31	32	22	24	15	20	.....	21.8	
Dover.....	Maximum...	31	39	51	39	...	37	40	33	34	34	37	33	45	41	44	...	37	37	35	46	32	34	42	45	40	38	40	50	.....	39.0 ^b	
	Minimum....	22	21	22	...	23	18	20	19	21	14	13	21	21	35	35	28	23	25	18	21	26	32	...	26	20	18	27	...	...	22.8 ^a	
Layton.....	Maximum...	32	38	52	42	42	36	39	36	34	35	39	33	49	41	43	43	38	35	33	46	37	38	43	44	44	37	43	43	...	39.8	
	Minimum....	23	22	19	23	29	15	18	19	20	14	18	20	24	32	34	29	24	23	20	23	25	29	32	34	22	25	15	23	...	23.4	
Newton.....	Maximum...	30	37	48	45	37	35	38	31	33	33	37	32	47	39	41	38	36	35	32	44	35	36	40	43	39	37	39	41	...	37.8	
	Minimum....	23	18	26	28	27	27	18	23	20	13	12	10	23	33	33	26	12	22	9	20	26	28	28	22	26	22	17	25	...	22.0	
Phillipsburg.....	Maximum...	34	39	48	36	39	36	40	32	35	33	37	36	46	43	44	40	38	37	35	46	34	37	43	48	41	39	42	50	...	39.6	
	Minimum....	24	22	22	28	26	21	22	25	22	16	14	26	24	36	36	28	25	24	20	23	29	31	34	31	28	22	21	26	...	25.2	
Sussex.....	Maximum...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Minimum....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<i>The Red Sandstone Plain.</i>																																
Bergen Point.....	Maximum...	35	46	49	42	42	38	41	35	36	34	38	37	47	46	48	41	46	40	38	46	38	38	48	48	47	42	42	48	.....	42.0	
	Minimum....	28	24	24	28	29	23	21	26	26	20	16	26	24	34	36	31	31	29	22	20	...	32	33	34	29	21	20	26	...	26.1 ^a	
Boonton§§.....	Maximum...	31	40	49	38	39	37	41	34	37	34	39	34	48	41	44	39	39	40	35	42	34	37	45	45	45	34	40	52	...	39.8	
	Minimum....	23	23	19	21	26	15	22	19	19	15	9	18	17	25	33	31	24	25	20	20	25	30	31	34	24	27	14	21	...	22.5	
Elizabeth.....	Maximum...	37	42	50	44	43	39	42	38	39	35	39	36	46	43	47	43	41	39	49	41	38	48	50	45	41	43	48	...	...	42.4	
	Minimum....	26	24	23	26	30	19	21	24	25	18	12	25	23	38	37	34	26	28	22	19	29	33	35	37	28	30	19	25	...	26.3	
Flemington.....	Maximum...	38	44	54	41	43	39	44	37	36	35	41	38	46	44	47	43	43	41	39	51	43	36	47	52	50	44	41	45	...	42.9	
	Minimum....	27	24	26	27	31	21	21	25	24	20	15	25	25	36	37	33	27	29	22	25	29	33	34	35	27	31	22	25	...	27.0	
Highwood.....	Maximum...	34	42	48	41	41	38	40	36	36	32	36	37	46	42	44	40	39	40	37	42	36	37	47	42	43	40	41	47	...	40.1	
	Minimum....	25	24	19	24	29	18	17	22	24	19	10	21	20	36	35	31	25	27	22	18	28	32	32	33	25	26	18	25	...	24.5	
Jersey City.....	Maximum...	34	42	45	41	43	39	40	38	35	34	37	35	45	42	45	43	40	38	38	40	47	49	45	40	42	47	...	...	40.8		
	Minimum....	26	26	25	34	32	25	25	31	28	21	17	29	30	38	37	34	27	30	24	26	33	35	36	36	34	27	23	31	...	29.3	
Lambertville.....	Maximum...	38	37	44	37	37	34	38	35	35	...	...	...	43	46	45	39	38	38	37	42	40	36	44	46	43	40	39	49	...	40.0 ^a	
	Minimum....	26	22	24	26	23	19	19	25	22	11	...	...	30	36	38	30	25	25	21	21	27	32	35	33	26	30	20	20	...	25.6 ^a	
Little Falls.....	Maximum...	34	42	48	43	43	40	43	39	37	...	...	...	38	47	43	47	40	38	40	37	45	38	41	48	48	46	...	...	42.4 ^a		
	Minimum....	...	22	28	23	20	23	24	23	17	14	23	23	38	37	29	...	20	17	22	28	34	31	31	32	25	20	27	...	25.2 ^a		
Newark.....	Maximum...	32	40	50	40	39	37	39	33	34	33	37	34	43	40	44	38	38	36	34	47	36	37	46	45	42	39	39	49	...	39.3	
	Minimum....	24	25	26	32	29	23	28	27	20	17	25	30	37	30	37	30	28	25	26	22	23	32	33	33	36	31	22	21	...	27.3	
New Brunswick.....	Maximum...	38	41	48	45	40	37	39	38	36	34	35	37	44	44	45	41	40	38	36	45	41	38	46	47	47	42	41	53	...	41.3	
	Minimum....	26	24	24	28	30	22	23	27	24	19	16	25	27	36	37	32	26	29	22	23	29	32	34	35	28	30	20	26	...	26.9	
Palisades Park.....	Maximum...	33	42	49	41	41	38	41	35	37	32	38	37	46	42	44	41	40	39	38	46	36	37	48	47	43	39	41	50	...	40.8	
	Minimum....	24	24	21	25	23	18	18	22	22	18	10	22	21	36	35	28	25	26	22	18	27	32	32	32	29	25	21	20	...	23.9	
Paterson.....	Maximum...	35	46	53	40	44	40	44	36	38	37	40	35	39	42	45	42	42	40	40	...	38	38	47	50	43	41	44	43	...	41.6 ^a	
	Minimum....	26	24	24	27	33	21	23	26	27	20	16	24	25	35	36	38	26	29	22	23	30	33	33	37	29	30	21	26	...	27.3	
Plainfield.....	Maximum...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Minimum....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Somerville.....	Maximum...	36	42	52	42	42	38	41	36	37	35	37	39	47	46	45	42	40	39	37	49	40	38	47	49	47	41	43	52	...	42.1	
	Minimum....	24	21	23	22	26	15	19	19	22	16	10	20	18	33	35	30	23	22	17	21	26	31	33	34	22	31	18	20	...	23.2	
South Orange.....	Maximum...	33	40	45	40	39	36	39	36	35	32	36	36	43	43	46	40	38	38	35	43	36	38	48	46	44	42	40	48	...	39.8	
	Minimum....	25	24	25	28	29	22	23	26	25	19	16	26	26	36	36	30	27	28	23	24	32	35	36	39	33	27	24	30	...	27.6	
New York, N. Y.....	Maximum...	34	41	49	43	42	39	41	37	35	32	38	35	47	46	46	40	41	38	38	43	38	39	46	47	44	46	42	51	...	41.4	
	Minimum....	24	25	25	33	28	26	24	32	26	19	16	29	31	38	37	28	26	25	22	23	32	35	33	35	34	23	22	33	...	28.0	
<i>The Southern Interior.</i>																																
Bridgeton.....	Maximum...	42	45	45	45	43	40	43	35	35	34	41	42	50	65	50	42	42	43	42	45	38	43	50	49	44	...	...	45	62	...	44.4

Scale of Shades



Based on 690 records.

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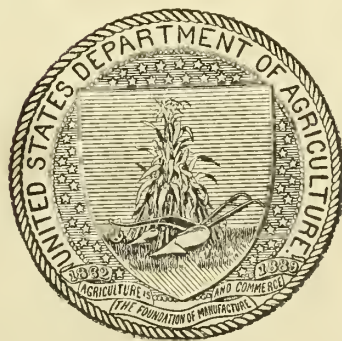
U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU
CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

MARCH, 1919.

BY
G. HAROLD NOYES
METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
APRIL 22, 1919.

Departure of the Mean Temperature from the Normal, March, 1919.



Shaded portions show excess (+).
 Unshaded portions show deficiency (-).
 Lines show amount of excess or deficiency.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

No. XXIV. TRENTON, N. J., MARCH, 1919.

No. 3.

GENERAL SUMMARY.

The predominant features of March weather in New Jersey in 1919 were the persistent high temperatures, and great wind movement. Moderately cold weather occurred only on the 6th, 14th, 15th, 16th, and from the 28th through the close of the month, and there were but four or five days wherein temperatures averaged under freezing. While during the early part of March the wind was not noticeably more blustery than usual, from the 27th to 30th one of the longest continued and hardest snows this portion of the country has ever experienced occurred. This storm was the result of the eastward movement of a low pressure trough which had centers over the Lakes and the east Gulf, and the centers virtually united into a cyclonic storm off the southern New England coast, which remained in that vicinity, but slowly diminishing intensity. The heaviest rain of the month, in nearly all instances, more than two inches, occurred during this storm. The absence of snow was a notable feature, practically all occurring on the 14th and 28th, and amounted to but little over a quarter of the usual quantity. The gale of the 14th drifted the snow in northern counties and caused great damage to all forms of insecure construction, such as unroofed buildings and uprooting trees, and in southern sections, it blew the soil loose, burying some early plants just above ground, and literally sandblasting their leaves.

The mean daily stage of the Delaware River at Phillipsburg was 5.6 feet, the highest being 10.7 on the 10th. At Trenton the mean daily stage was 3.9 feet, which was normal; the highest stage was 6.1 feet on the 11th.

The temperature departure from normal for the year 1919 to date, by sections is: The Highlands, +4.6°; Red Sandstone Plain, +4.5°; Southern Interior, +4.3°; Sea Coast, +3.7°. The precipitation accumulated departure from normal for the year 1919 to date, by sections is: The Highland, +0.10 inch; Red Sandstone Plain, +1.03 inches; Southern Interior, +0.13 inch; Sea Coast, +0.61 inch.

Storm warnings were displayed along the coast on the 5th, 14th, 9th, 13th, 17th, 19th, 22d, 23d, 27th to 29th.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 37 stations was 43.2°, which was 5.7° above normal. The highest temperature was 77° at New Brunswick and Vineland on the 21st and 17th, respectively, and the lowest, 12° at Newton on the 14th. The coldest station was Charlotteburg and the warmest, Vineland. The greatest daily range of temperature was 43° at Layton on the 25th.

PRECIPITATION.

The mean total precipitation of the State, as deduced from observations of 42 stations was 5.32 inches, which was 1.27

inches above normal. The mean total snowfall was 1.6 inches, which was 4.3 inches less than normal. The greatest monthly precipitation was 7.40 inches at Paterson, and the least, 3.77 inches at Bridgeton. The greatest amount of precipitation in any 24 consecutive hours was 2.84 inches at Highwood on the 27th-28th. The mean number of days on which 0.01 inch or more precipitation occurred was 13 which was 2 more than normal.

WIND.

The prevailing wind direction was from the northwest, with an approximate velocity of 18 miles per hour, which is notably greater than normal, the highest wind velocity, sustained for 5 consecutive minutes, was 88 miles per hour from the northwest on the 29th at Long Branch. High winds were also reported on the 4th, 6th, 9th, 10th, and 27th.

SUNSHINE AND CLOUDINESS.

The mean of the number of clear days throughout the State was 14, which was normal; partly cloudy, 7, which was 1 less than normal; cloudy, 10, which was 1 more than normal. The mean percent. of possible sunshine approximated 59, and was about normal.

MISCELLANEOUS.

The mean atmospheric pressure, reduced to sea level, was 30.12 inches, which was 0.11 inch above normal. Highest readings occurred on the 15th, and the lowest on the 28th. Dense fog was reported on the 5th, 6th, 9th, 10th, 16th and 17th. Sleet occurred on the 15th, 27th-28th. The aurora was observed on the 7th, 22d and 23d. Solar halos were observed on the 2d, 5th and 13th; lunar halos on the 12th, 13th, 14th and 17th. Thunder was heard at Bridgeton on the 1st.

COMPARATIVE DATA FOR MARCH.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more precip.
1885.....	30.4	66	2	1.10	2.29	0.23				
1886.....	37.7	70	9	3.70	5.27	2.59				
1887.....	37.7	61	8	3.34	5.45	2.19			13	10
1888.....	32.8	72	0	5.71	8.22	3.75			12	11
1889.....	40.5	67	19	3.79	6.49	1.98			13	8
1890.....	37.6	78	0	6.08	7.92	4.14			13	14
1891.....	37.2	68	4	5.06	8.02	2.05	8	10	13	12
1892.....	34.4	64	6	4.75	7.21	3.11	10	12	9	9
1893.....	37.0	68	6	3.73	6.26	2.36	10	10	11	10
1894.....	44.2	83	12	1.77	2.65	1.09	12	11	8	10
1895.....	36.7	72	7	3.16	4.66	1.77	12	8	11	10
1896.....	34.0	69	-8	5.34	7.38	3.14	13	8	10	11
1897.....	40.0	77	18	2.78	4.32	1.55	11	9	11	10
1898.....	45.1	77	16	3.33	4.25	2.56	9	10	12	12
1899.....	38.6	73	13	6.54	9.58	3.45	7	10	14	13
1900.....	35.6	67	-9	3.51	4.96	2.48	12	12	7	10
1901.....	39.2	75	-8	4.64	8.07	2.40	9	10	12	12
1902.....	43.9	77	0	4.34	7.20	3.16	12	10	9	11
1903.....	47.6	79	13	5.13	8.53	3.60	11	8	12	10
1904.....	37.2	72	1	3.43	4.76	2.02	11	8	12	13
1905.....	39.8	87	-7	3.95	5.06	2.80	14	8	9	12
1906.....	34.4	62	-15	5.09	6.77	2.91	10	9	12	11
1907.....	41.2	88	-11	3.04	4.38	1.81	13	10	8	10
1908.....	41.8	89	7	2.80	4.92	1.06	11	9	11	12
1909.....	38.3	74	-6	3.48	4.66	2.31	12	10	9	13
1910.....	44.5	88	10	1.22	2.36	0.29	14	10	7	6
1911.....	37.6	76	3	3.38	4.50	2.64	10	12	9	11
1912.....	36.9	72	3	7.61	9.61	5.95	9	11	11	14
1913.....	44.8	79	-1	5.15	7.73	2.47	10	9	12	12
1914.....	35.4	75	-6	3.65	6.45	2.02	13	10	8	10
1915.....	36.1	63	6	1.13	1.65	0.58	20	7	4	3
1916.....	31.7	71	-9	3.48	4.96	2.38	13	8	10	12
1917.....	38.2	72	0	4.65	7.14	2.28	12	7	11	13
1918.....	41.8	82	0	2.06	3.76	0.99	17	7	7	9
1919.....	43.2	77	12	5.32	7.40	3.77	14	7	10	13

Climatological data for March, 1919.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation 0.1 in. or more.	Clear.	Pt. cloudy.			Cloudy.
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	28	42.3	+5.5	71	21	19	14	39	4.75	+0.71	1.70	1.0	11	20	4	7		Samuel J. Hixson. George S. Briggs. Brice E. Riker. William C. Harris.
Charlotteburg.....	Passaic.....	719	27	37.8 ^a	+3.1	65	21	20	7†	33	6.08	+2.14	1.87	1.0	12	19	7	5	ne.	
Culvers Lake†.....	Sussex.....	848	18	.....	.....	.....	.....	.....	.....	.....	4.71	+1.28	1.95	1.5	11	18	4	9	e.	
Dover.....	Morris.....	600	35	40.3	+5.4	67	21	21	14†	39	6.23	+2.33	1.87	1.5	13	10	12	9	.....	
Layton.....	Sussex.....	480	19	41.3 ^b	+7.1	69	26	18	15	43	5.92	+2.25	2.06	1.0	12	16	3	12	nw.	A. M. Depue. Irving G. Kern. D. Wilson Smith.
Newton.....	Sussex.....	769	38	40.2 ^a	+4.4	65	21†	12	14	33	4.22	+0.62	1.43	2.0	11	13	5	13	nw.	
Phillipsburg.....	Warren.....	363	37	41.6	+3.7	69	26	20	14	36	4.61	+0.96	2.02	1.7	11	17	4	10	n.	
Means and extremes...				40.6	+4.9	71	21	12	14	43	5.22	+1.47	2.06	1.4	12	16	6	9	nw.	
<i>The Red Sandstone Plain.</i>																				
Bergen Point†.....	Hudson.....	37	22	43.2 ^c	+5.4	63	25†	20	30	32			1.46	3.0	13				ne.	William H. Mitchell. J. W. Demmers.
Boonton.....	Morris.....	400	29	40.2	.....	68	21	20	8	38	6.26	+2.52	2.04	1.9	13	19	3	9	nw.	
Chatham.....	Morris.....	330	17																n.	L. B. Bonnett.
Elizabeth.....	Union.....	45	40	44.3	+5.9	71	21	24	14	33	5.86	+1.60	.....	2.0	14	9	13	9	n.	
Flemington.....	Hunterdon.....	140	31	44.9	+7.4	71	21	24	14	38	5.06	+1.45	1.57	1.5	14	16	5	10	n.	Hiram E. Deats. Charles J. Bates. S. K. Pearson, Jr. Thomas R. Hunt.
Highwood.....	Bergen.....	90	30	42.0	+5.8	67	21	24	7†	33	6.50	+2.35	2.84	2.8	13	9	8	14	ne.	
Jersey City.....	Hudson.....	10	20	44.0	+5.8	72	21	25	14†	28	5.88	+1.78	1.12	3.7	13	8	14	9	n.	
Lambertville.....	Hunterdon.....	80	32	42.2	+3.2	65	21	22	14	31	5.95	+1.84	1.52	1.0	14	13	6	12	n.	
Little Falls.....	Passaic.....	180	16	42.8 ^a		69	21	24	7†	32	6.08	+2.09	1.87		12	19	3	9	w.	Montclair Water Co. Prof. William Wiener. N. J. Experiment Station. Hackensack Water Co.
Newark.....	Essex.....	159	77	41.8	+4.3	66	21	22	14	28	5.03	+1.10	2.38	2.2	10	9	6	16	n.	
New Brunswick.....	Middlesex.....	110	66	44.8	+6.6	77	21	23	14	34	6.09	+2.18	2.01	1.8	13	14	6	11	n.	
New Milford.....	Bergen.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6.45	.....	2.70	.....	11	.....	.....	.....	.....	
Palisades Park.....	Bergen.....	80	4	41.6		68	21	22	7	34	6.09		2.21	4.3	15	11	11	9	nw.	George P. Kirsten. Marion T. Probert. John C. Sutphen. M. S. Taylor
Paterson.....	Passaic.....	80	48	44.3	+5.8	71	21	24	30	33	7.40	+3.17	2.06	2.7	13	9	5	17	nw.	
Plainfield.....	Union.....	100	32	43.8	+7.2	69	21	23	14	34	6.20	+2.39	2.33	0.9	12	12	7	11	nw.	
Pompton Plains.....	Morris.....	195	17	.....	.....	.....	.....	.....	.....	.....	6.28	+2.24	2.18	.....	12	.....	.....	.....	.....	
Somerville.....	Somerset.....	60	37	42.7	+5.8	70	21	17	14	42	6.69	+2.74	2.28	1.0	13	15	7	9	nw.	A. A. Macdonald. Dr. W. J. Chandler. Hackensack Water Co. U. S. Weather Bureau.
South Orange.....	Essex.....	200	49	42.9	+6.1	67	21	24	28†	28	6.23	+2.42	2.00	2.0	14	16	4	11	w.	
Woodcliffe Lake.....	Bergen.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5.46	.....	2.58	.....	11	.....	.....	.....	.....	
New York, N. Y.....	.....	365	49	42.0	+4.5	65	21	22	28	26	4.69	+0.59	1.59	1.9	12	6	9	16	nw.	
Means and extremes...				43.0	+5.8	77	21	17	14	42	6.09	+2.13	2.84	2.2	13	13	7	11	n.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	38	46.6	+5.5	75	17	27	14†	35	3.77	-0.70	1.22	0.5	13	22	0	9	nw.	Henry A. Jorden. D. S. B. McCoy. U. S. Army. Melvin F. Wills.
Burlington.....	Burlington.....	12	33	46.2	+6.3	75	17	25	14	38	5.58	+1.50	1.40	1.2	13	19	4	8	nw.	
Camp Dix.....	Burlington.....	.....	1	45.8	.....	75	17†	25	14	39	4.43	.....	1.20	1.8	11	9	11	11	nw.	
Clayton.....	Gloucester.....	126	27	45.4 ^a	+5.6	74	17	25	14	35	4.31	+0.33	1.20	1.5	12	17	8	6	nw.	
Hammonton.....	Atlantic.....	103	17								4.39	+0.02	1.22		11	20	6	5	nw.	G. H. Parkhurst. Rev. W. A. Stanton. James M. Armstrong. R. W. Holman.
Hightstown.....	Mercer.....	120	26	45.4 ^a	+6.4	70	17†	25	14†	32	5.02	+0.66	2.06	1.1	14	13	10	8	nw.	
Indian Mills.....	Burlington.....	76	30	45.2	+5.4	75	17†	22	12	38	4.62	+0.52	1.33	2.0	14	11	11	9	nw.	
Lakewood.....	Ocean.....	54	16	43.6	+3.6	69	17	24	8	36	5.01	+0.58	1.03	2.0	13	11	6	14	n.	
Moorestown.....	Burlington.....	75	57	45.4	+6.6	74	17	21	2	36	5.26	+1.45	2.21	1.5	13	14	11	6	nw.	Geo. L. Gillingham. William L. Flick. Lincoln Van Gilder. U. S. Weather Bureau.
Northfield.....	Atlantic.....	25	12	.....	.....	.....	.....	.....	.....	.....	4.14	+0.14	1.51	0.2	13	.....	.....	.....	.....	
Pleasantville.....	Atlantic.....	26	21	.....	.....	.....	.....	.....	.....	.....	4.17	+0.27	1.49	.....	14	16	6	9	.....	
Trenton.....	Mercer.....	190	48	43.0	+3.9	72	17	22	31	32	4.64	+0.60	1.93	0.5	13	10	7	14	n.	
Tuckerton.....	Ocean.....	23	26	43.2	+4.2	65	13†	24	8	32	4.84	+0.45	1.43	3.0	11	10	14	7	nw.	Frank R. Austin. H. C. Himes
Vineland.....	Cumberland.....	109	51	46.8 ^b	+6.5	77	17	27	14†	35	.....	.....	1.21	0.7	.....	.....	.....	.....	.....	
Woodbine.....	Cape May.....	43	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Philadelphia, Pa.....	.....	117	49	45.4	+5.4	73	17	24	31	32	4.81	+1.36	1.80	3.0	12	11	9	11	n.	
Means and extremes...				45.1	+5.4	77	17	21	2	39	4.63	+0.48	2.21	1.4	13	14	8	9	nw.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	30	43.6	+5.3	63	21	26	28	25	4.69	+0.39	1.02	0.6	12	14	8	9	w.	Miss Dorothy A. Alexander. U. S. Weather Bureau. U. S. Weather Bureau. William D. Martin, Jr. U. S. Weather Bureau.
Atlantic City.....	Atlantic.....	16	46	43.4	+4.6	62	13	26	31	22	3.82	+0.09	0.88	0.1	13	11	8	12	nw.	
Cape May City.....	Cape May.....	17	35	44.1	+3.3	62	21	29	31	22	3.99	+0.26	1.34	0.1	12	11	9	11	nw.	
Long Branch.....	Monmouth.....	25	12	40.2 ^b	+2.0	63	21	22	31	27	6.75	+2.24	1.80	2.1	14	9	7	15	nw.	
Sandy Hook.....	Monmouth.....	22	21	42.1	+5.4	57	5	23	14	20	3.94	-0.84	0.86	1.8	13	8	9	14	nw.	
Means and extremes...				42.7	+4.1	63	21	22	31	27	4.64	+0.43	1.80	0.9	13	11	8	12	nw.	
For the State.....				43.2	+5.2	77	17†	12	14	43	5.32	+1.27	2.84	1.6	13	14	7	10	nw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

†† Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Pleasantville is Atlantic City.

Stations.	Watershed.	Day of month.																																Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>The Highlands and Kittatany Valley.</i>																																		
Belvidere	Delaware	.72					.24			1.70					*	.07	.55		.11	*	.20							*	1.16				4.75	
Charlotteburg	Passaic	1.31				*	.17			1.87		T.			*	.11	.63	.23		*	.18							*	1.55				6.08	
Culvers Lake	Delaware	.78				T.	.08	T.		1.95					T.	.01	.47	.10	.15	.01	.04							.55	.57	T.		T.	1.70	
Dover	Passaic	1.38				T.	*			1.87		.05			T.	*	*	.65		.22	*	.15						*	1.91				6.23	
Layton	Delaware	.84				T.	.04			2.06					.01	.02	.55	.13	.24	.04	1.02							.73	.24	T.			5.92	
Newton	Delaware	.62				T.	.17	T.		1.43					.05	T.	.48	.05	.20	.04	.01							.48	.69	T.			4.22	
Phillipsburg	do.	.61				.22	T.			2.02		T.			.08	.08	.36	T.	.11	.04	.01							1.03	.05				4.61	
Sussex	Hudson																																	
<i>The Red Sand-stone Plain.</i>																																		
Bergen Point	Coast	.91				.03	.29	T.		\$					.08	.06	.31	.11	.52	.81	.17							1.46	1.30	T.			\$	
Boonton III	Passaic	1.12					.11		T.	1.17	.87	.01	T.			.02	.15	.36	.18	.01	.20								2.03	.03	T.		6.26	
Chatham II	do.					*																						*	*	2.43				
Elizabeth	Coast	.95				*	.28	T.		.97					.05	*	*	.44	.17	*	.60		T.					*	*	2.40			5.86	
Flemington	Raritan	.88				.05	.21			1.33		.02			.05	.07	.35	.06	.15	.11	.21							.26	1.31				5.06	
Highwood	Hackensack	.85				.15	.08			1.61		T.			.02	T.	.33	.07	.10	.34	.05		T.					1.04	1.85	.01			6.50	
Jersey City**	Coast	.95				*	.18			1.12		T.			.08	T.	.30	.09	.10	.45	.18		T.					*	*	2.43			5.88	
Lambertville	Delaware	1.06				.16	.20			1.52		.02			.04	.08	.45	.06	.21	*	.28							*	1.87	T.			5.15	
Little Falls**	Passaic	1.19				.15	.03			1.78		T.			.03	.04	.39	.02	.20	.26	T.							1.87	.12				6.08	

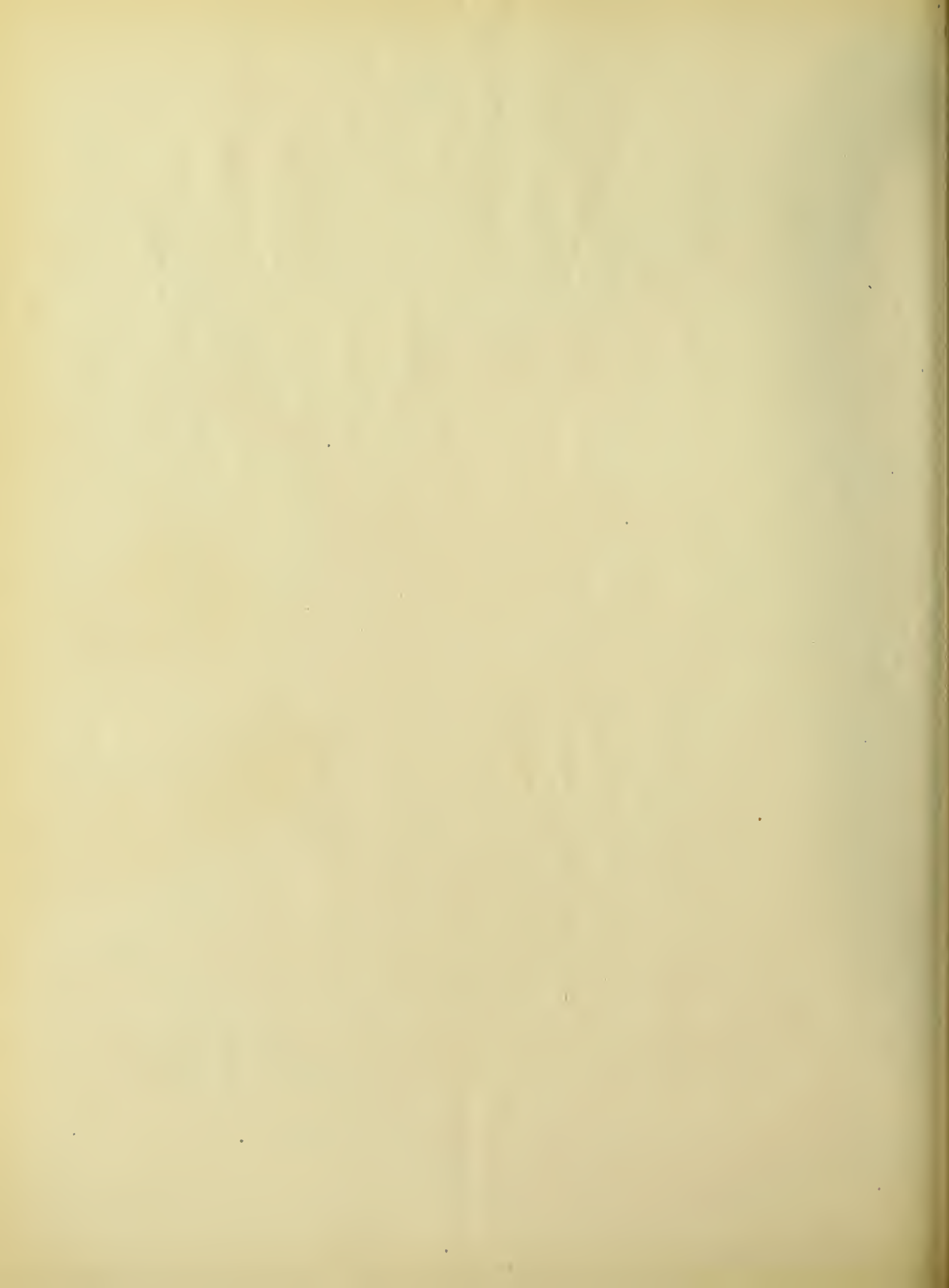
* Precipitation included in the next following measurement. **Precipitation for 24-hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

Stations.	Pressure.					Wind.			Moisture.		Sun- shine	
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	Percentage of possible sunshine
							Miles per hour.	Direction.	Date.			
Atlantic City.....	30.12	30.78	15	29.39	27	11	38	nw.	28	78	75	60
Cape May City.....	30.13						46	nw.	29			
Long Branch.....							88	nw.	29			
Newark.....							48	nw.	28	70*	62†	
New York, N. Y.....	30.10	30.83	15	29.42	28	24	92	nw.	28	67	59	55
Palisades Park.....	30.10	30.85	15	29.43	28							
Philadelphia, Pa.....	30.15	30.80	15	29.45	27	14	47	nw.	29	77	69	65
Sandy Hook.....	30.10	30.84	15	29.38	27	23	74	nw.	28	83	79	60
Trenton.....	30.11	30.78	15	29.43	27	16	62	nw.	28	71	64	55

* 7 a. m. † 9 p. m.

§§ Instruments are read in the morning; the maximum temperature then read is charged





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U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU
CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

APRIL, 1919.

BY
G. HAROLD NOYES
METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
MAY 28 1919.

Departure of the Mean Temperature from the Normal, April, 1919.



Shaded portions show excess (+).
Unshaded portions show deficiency (-).
Lines show amount of excess or deficiency.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

VOL. XXIV. TRENTON, N. J., APRIL, 1919. No. 4.

GENERAL SUMMARY.

The mean temperature and rainfall during April, 1919, in New Jersey, were not sufficiently abnormal to merit attention, but there were several features worthy of notice. Cold periods occurred on the 1st and 2d, and on the 25th and 26th. On the 1st and 2d, at several stations the lowest records for April were equalled or exceeded. And on the 25th and 26th, while the cold was much less severe than the first period, as it followed a fortnight of mild weather its effect was felt in a much more pronounced manner, and was attended by a long persistent and hard blow from the northwest and north, with light snow flurries, the latter, however, being unimportant in quantity. The greater portion of the rain fell in two storms, one of which on the 12th was about an inch, and the other on the 16th amounting to nearly two inches.

With the close of April the total snowfall of the winter 1918-1919 may be summarized, and the mean total for the whole State is 4.6 inches. This undoubtedly is one of the least snowy records of any winter in this region, and it must be borne in mind that this mean total comprises the notably snowy districts of the northern highlands as well as the southeastern coastal plain of light average snowfall.

The weather was of superior benefit for the growth of winter grains and grass, and favorable for outdoor work. The stage of gardens and truck farms was a little in advance of normal, and farm work was well in hand or ahead of normal.

The mean daily stage of the Delaware River at Phillipsburg was 5.0 feet.

At Trenton the mean daily stage was 3.5 feet, which was 0.5 foot below normal. The highest stage was 4.2 feet on the 15th.

The temperature departure from normal for the year 1919 to date, by sections, is: The Highlands, $+3.3^{\circ}$; Red Sandstone Plain, $+3.4^{\circ}$; Southern Interior, $+3.5^{\circ}$; Sea Coast, $+2.9^{\circ}$. The precipitation accumulated departure from normal for the year 1919 to date, by sections, is: The highlands, -0.43 inch; Red Sandstone Plain, $+0.28$ inch; Southern Interior, $+0.15$ inch; Sea Coast, $+0.75$ inch.

Storm warnings were displayed along the coast on the 10th, 13th, 24th, and 25th.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 37 stations, was 49.3° , which was 0.3° above normal. The highest temperature was 85° at Layton on the 15th, and the lowest, 10° at Culvers Lake on the 2d; the highest monthly mean temperature was 53.4° at Bridgeton, and the lowest, 44.4° at Charlotteburg. The greatest daily range of temperature was 44° at Layton on the 7th. The daily mean temperatures were below freezing only on the 1st, 2d, and 25th, the last two days being confined to northern interior portions of the State.

PRECIPITATION.

The mean total precipitation of the State, as deduced from observations of 40 stations, was 3.06 inches, which was 0.41 inch below normal. The mean snowfall was less than a tenth of an inch, or 0.8 inch below normal, measurable amounts being confined almost wholly to the northern highlands and the

sea coast. The greatest monthly amount of precipitation was 4.79 inches at Tuckerton, and the least 2.20 inches at Culvers Lake. The greatest amount in any 24 consecutive hours was 2.79 inches at Long Branch on the 16th-17th. The mean of the number of days on which 0.01 inch or more precipitation fell was 10, which was normal.

WIND.

The prevailing wind direction was from the northwest, with an approximate velocity of 13 miles per hour which was not much variation from normal. The highest velocity, sustained for 5 consecutive minutes, was 70 miles per hour from the east, on the 16th, at Long Branch.

SUNSHINE AND CLOUDINESS.

The mean of the number of clear days throughout the State was 13, which was 2 more than normal; partly cloudy, 7, or 3 less than normal; cloudy, 10, or 1 more than normal. The mean of the percent. of possible sunshine approximated 57, and was about normal.

MISCELLANEOUS.

The mean atmospheric pressure, reduced to sea level, was 30.03 inches, which was 0.03 inch above normal. Thunderstorms occurred very generally on the 16th, and at scattered points on the 8th and 15th. Lunar halos were noted on the 7th and 14th; solar halos on the 4th, 8th, and 20th. Dense fog occurred on the 7th, 8th, 10th, 11th and 16th. High winds occurred on the 11th, 16th, 24th, 25th, 26th and 29th. The last date of freezing temperature, which may be the record that has to be regarded as the last killing frost in Spring of this year, occurred on the 26th, with a few stations reporting the 25th, 27th, 28th, and 30th, and a few stations on the coast, the 2d, and 3d.

COMPARATIVE DATA FOR APRIL.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	0.01 inch or more prec.
1885.....	48.4	88	26	2.79	2.86	0.89	.....	.....	.....	.....
1886.....	50.6	86	27	3.40	5.48	1.86	.....	.....	.....	.....
1887.....	47.3	87	16	2.70	3.77	0.91	.....	.....	.....	.....
1888.....	47.9	92	22	3.28	4.68	1.89	.....	.....	.....	.....
1889.....	51.2	83	25	5.32	7.25	2.92	.....	.....	.....	.....
1890.....	50.4	86	21	2.65	4.58	1.89	.....	.....	.....	.....
1891.....	52.0	88	20	2.19	3.80	1.39	13	11	6	8
1892.....	49.3	87	19	2.49	4.41	1.05	9	13	8	8
1893.....	49.2	82	19	5.21	7.12	2.97	9	10	12	11
1894.....	50.3	88	10	3.09	4.86	1.71	12	9	9	9
1895.....	49.1	89	19	4.88	7.75	3.47	11	7	12	10
1896.....	52.4	98	12	1.85	2.30	0.64	13	10	7	7
1897.....	50.4	89	19	3.79	6.98	2.17	14	11	5	9
1898.....	47.8	81	13	3.74	4.94	2.17	8	11	11	11
1899.....	49.9	88	18	1.73	3.25	0.48	16	10	4	4
1900.....	50.8	82	18	2.29	3.03	1.59	14	9	7	6
1901.....	48.3	89	23	6.31	10.22	3.46	8	7	15	12
1902.....	50.2	93	20	3.62	5.99	2.45	10	11	9	9
1903.....	50.9	92	18	3.97	7.03	2.40	13	7	10	9
1904.....	46.7	85	16	3.42	4.71	2.00	9	12	9	10
1905.....	49.9	84	18	2.88	4.03	1.53	12	11	7	10
1906.....	51.2	87	17	3.64	6.42	1.17	15	10	5	8
1907.....	45.2	83	19	3.78	8.67	2.06	11	9	10	11
1908.....	51.2	93	13	2.72	3.86	1.42	14	9	7	11
1909.....	50.2	88	17	5.97	8.90	3.84	10	11	9	13
1910.....	53.5	88	20	5.34	7.56	3.43	9	11	10	12
1911.....	47.4	88	14	4.11	5.58	2.87	10	10	10	11
1912.....	50.4	82	18	3.56	6.02	1.81	9	10	11	14
1913.....	52.1	89	19	5.78	8.53	4.14	14	7	9	11
1914.....	48.4	89	15	3.67	4.78	2.35	13	10	7	11
1915.....	54.4	96	20	2.71	4.13	1.28	14	10	6	9
1916.....	48.2	85	20	3.32	6.14	0.90	10	9	11	13
1917.....	48.8	88	15	2.39	3.54	1.19	15	8	7	9
1918.....	49.8	81	18	4.05	5.79	2.88	11	8	11	12
1919.....	49.3	85	10	3.06	4.79	2.20	13	7	10	10

Climatological data for April, 1919.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation of 0.1 in. or more.	Clear.	Pt. cloudy.			Cloudy.
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	28	49.3 ^a	-0.3	83	7	20	2	41	3.44	+0.17	0.82	T.	12	16	3	11	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	27	44.4	-2.3	72	7	18	2	40	2.86	-1.07	0.66	0	11	18	5	7	w.	George S. Briggs.
Culvers Lake††.....	Sussex.....	848	18	.....	.....	.....	.....	10	2	.....	2.20	.....	0.47	0.7	13	13	9	8	e.	Brice E. Riker.
Dover.....	Morris.....	600	35	46.8	-0.5	80	7	19	2	36	2.72	-0.79	0.86	T.	11	6	12	12	.....	William C. Harris.
Layton.....	Sussex.....	480	19	46.4 ^b	-0.1	85	7	21	25	44	2.82	-0.49	0.80	0.5	12	11	4	15	sw.	A. M. Depue.
Newton.....	Sussex.....	769	38	47.2	-0.4	80	7	15	2	35	2.41	-0.80	0.87	T.	14	13	3	14	nw.	Irving G. Kern.
Phillipsburg.....	Warren.....	363	37	49.3	-0.3	84	7	21	2	40	2.30	-0.72	1.03	T.	8	14	8	8	nw.	D. Wilson Smith.
Means and extremes.....				47.2	-0.6	85	7	10	2	44	2.68	-0.62	1.03	0.2	12	13	6	11	nw.	
<i>The Red Sandstone Plain.</i>																				
Bergen Point††.....	Hudson.....	37	22	49.3 ^b	+0.8	70	7	21	2	39	.....	.....	1.15	T.	.....	.....	.....	.....	nw.	William H. Mitchell.
Boonton.....	Morris.....	400	29	46.8 ^a	.....	78	7	21	2	38	2.73	-1.03	1.58	T.	11	15	6	9	nw.	J. W. Demmers.
Chatham.....	Morris.....	330	17	.....	.....	.....	.....	.....	.....	.....	2.87	-0.78	1.47	T.	10	14	4	12	.....	George Shields.
Elizabeth.....	Union.....	45	40	49.6	-1.2	80	7	21	2	37	2.87	-0.70	1.63	T.	10	11	9	10	nw.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	31	51.1	+2.0	81	7	22	1	40	2.49	-0.95	0.71	0	11	16	7	7	nw.	Hiram E. Deats.
Highwood.....	Bergen.....	90	30	48.2	-0.3	74	7	20	2	38	2.86	-0.53	1.02	T.	10	10	8	12	nw.	Charles J. Bates.
Jersey City.....	Hudson.....	10	20	50.3	+0.9	73	23	23	2	30	2.55	-1.15	1.31	T.	11	11	11	8	nw.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	32	47.9	-2.5	75	7	21	2	31	2.96	-0.44	1.47	T.	8	10	4	16	n.	Thomas R. Hunt.
Little Falls.....	Passaic.....	180	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Montclair Water Co.
Newark.....	Essex.....	159	77	48.3	-0.8	79	7	22	1	36	2.51	-1.22	1.41	T.	11	13	6	11	ne.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	110	66	50.0	+0.3	79	7	22	2	36	2.73	-1.06	0.73	T.	10	13	6	11	nw.	N. J. Experiment Station.
New Milford.....	Bergen.....	.....	.....	48.8 ^a	.....	74	7	18	2	38	2.61	.....	1.60	0	9	.....	.....	.....	.....	Hackensack Water Co.
Palisades Park.....	Bergen.....	80	4	47.6	.....	74	7	2	2	35	2.66	.....	1.35	T	9	13	7	10	nw.	George P. Kirsten.
Paterson.....	Passaic.....	80	48	51.1	+0.8	82	7	22	2	38	2.68	-0.81	0.86	0	11	6	6	18	nw.	Marion T. Probert.
Plainfield.....	Union.....	100	32	49.4	+1.2	80	7	22	2	38	2.91	-0.99	1.52	T.	9	14	6	10	nw.	John C. Sutphen.
Pompton Plains.....	Morris.....	195	17	.....	.....	.....	.....	.....	.....	.....	2.52	-1.04	1.47	.....	8	.....	.....	.....	nw.	M. S. Taylor
Somerville.....	Somerset.....	60	37	48.6	-0.1	79	7	20	2	43	2.97	-0.58	0.83	0	11	13	7	10	nw.	A. A. Maedonald.
South Orange.....	Essex.....	200	49	48.7	+0.4	77	7	21	2	34	2.97	-0.52	1.50	T.	10	10	10	10	w.	Dr. W. J. Chandler.
Woodcliff Lake.....	Bergen.....	.....	.....	.....	.....	.....	.....	21	.....	.....	2.21	.....	1.37	0	9	.....	.....	.....	.....	Hackensack Water Co.
New York, N. Y.....		365	49	48.8	+0.7	76	7	21	1	35	2.55	-0.75	1.30	T.	11	5	13	12	nw.	U. S. Weather Bureau.
Means and extremes.....				49.0	+0.1	82	7	18	2	43	2.71	-0.84	1.63	T.	10	12	7	11	nw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	38	53.4	+1.6	77	7	22	2	35	3.45	+0.02	0.95	T.	8	21	0	9	nw.	Henry A. Jorden.
Burlington.....	Burlington.....	12	53	52.8	+1.7	80	7	21	2	37	3.15	-0.22	0.92	T.	8	20	4	6	nw.	D. S. B. McCoy.
Camp Dix.....	Burlington.....	.....	1	50.0	.....	80	7	21	2	38	.....	.....	.....	.....	.....	13	14	.....	w.	U. S. Army.
Clayton.....	Gloucester.....	126	27	51.8 ^b	+1.5	78	7	22	2	36	.....	.....	0.82	T.	.....	20	1	9	nw.	Melvin F. Wills.
Hammononton.....	Atlantic.....	103	17	.....	.....	.....	.....	.....	.....	.....	3.23	-0.61	1.08	0	8	20	5	5	nw.	G. H. Parkhurst.
Hightstown.....	Mercer.....	120	26	50.2	+0.4	80	7	20	1	37	3.38	-0.53	0.88	0.2	12	15	7	8	nw.	Rev. W. A. Stanton.
Indian Mills.....	Burlington.....	76	30	51.4	+1.1	81	7	19	2	39	2.98	-0.15	0.85	T.	8	13	9	8	nw.	James M. Armstrong.
Lakewood.....	Ocean.....	54	16	49.8	+0.1	82	7	22	2	41	3.23	-0.50	0.98	T.	7	9	8	13	w.	R. W. Holman.
Moorestown.....	Burlington.....	75	57	51.0	+1.0	80	7	21	2	40	3.08	-0.11	0.87	T.	7	16	10	4	nw.	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	12	.....	.....	.....	.....	.....	.....	.....	4.33	+0.96	1.15	0	11	.....	.....	.....	.....	William L. Fliek.
Pleasantville.....	Atlantic.....	26	21	.....	.....	.....	.....	.....	.....	.....	4.44	+0.95	2.34	0	7	18	2	10	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	48	49.9	+0.1	77	7	21	1	33	2.91	-0.38	1.44	T.	9	8	13	9	nw.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	26	49.4	+1.5	71	24	15	2	35	4.79	+1.00	1.55	T.	9	16	7	7	nw.	Frank R. Austin.
Vineland.....	Cumberland.....	109	51	52.4 ^a	+1.7	79	7	22	2	36	3.20	-0.14	0.98	0	8	18	6	6	sw.	H. C. Himes.
Woodbine.....	Cape May.....	43	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Jos. H. Cohen.
Philadelphia, Pa.....		117	49	52.4	+1.6	77	7	24	1	33	3.17	+0.26	1.59	T.	8	9	11	10	nw.	U. S. Weather Bureau.
Means and extremes.....				51.1	+1.1	81	7	15	2	41	3.51	+0.02	2.34	T.	8	15	7	8	nw.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	30	48.2 ^a	+0.1	65	8	22	2	23	.....	.....	.....	T.	9	18	3	9	w.	Miss Dorothy A. Alexander.
Atlantic City.....	Atlantic.....	16	46	48.8	+1.2	72	24	23	1	34	3.50	+0.51	1.66	T.	10	12	10	8	nw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	35	50.0	+1.6	72	24	26	1	33	4.45	+1.46	1.87	0.1	9	8	10	12	nw.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	12	47.0 ^e	-1.7	70	7	22	1	27	4.72	+0.29	2.79	0.1	12	6	10	14	nw.	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	21	48.0	+1.3	69	7	23	1	26	2.61	-1.68	1.22	0.1	11	10	11	9	w.	U. S. Weather Bureau.
Means and extremes.....				48.4	+0.5	72	24	22	1	34	3.82	+0.14	2.79	0.1	10	11	9	10	nw.	
For the State.....				49.3	+0.3	85	7	10	2	44	3.06	-0.41	2.79	T	10	13	7	10	nw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

†† Received too late to be included in the means.

Reference letters, ^a, ^b, ^c, etc., appearing in the table indicate number of days missing; for example, ^b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Pleasantville is Atlantic City; Milford and Woodcliff Lake are Hackensack.

Daily precipitation for April, 1919.

Stations.	Watershed.	Day of month.																															Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
<i>The Highlands and Kittatinny Valley.</i>																																	
Solvadore.....	Delaware.....				.15				*		.48	.38	.07		.18	*	.82								1.30				*	.06			3.44
Charlotteburg.....	Passaic.....		.05	.13					.18		*	.66						1.43	T.					.33				*	.08			2.86	
Silvers Lake.....	Delaware.....		T.	.10	T.			T.	.08		.33	.30			.12	.37	.47	.02				.01		.22		.01		.02	.15			2.20	
Dover.....	Passaic.....		T.	*	.15				.12		.76	.10			.15		1.08	.04						.25				.07				2.72	
Dayton.....	Delaware.....		.02	.11					.11		.54	.26	T.		.05	.74	.41	T.			.05		.05		.35		.02		.16	T.		2.82	
Newton.....	Delaware.....		T.	.09	T.				.09		.18	.53	.02		.16	.37	.50	.03			.03		.03		.25		.03		.04	.09		2.41	
Phillipsburg.....	do.....	T.		T.	.05				.03		.54	.32	T.		.05	1.03	.03	T.						.25		T.		T.				2.39	
Sussex.....	Hudson.....																																
<i>The Red Sandstone Plain.</i>																																	
Bergen Point.....	Coast.....			*	.15				.10	T.	.05	.60	.12	T.	.06	1.15	.28	.04								\$		T.	T.		.03		\$
Boonton III.....	Passaic.....	T.		.01	.08	.01			.11	T.	T.	.60	T.		T.	.12	1.58	T.	.01					.11	.07	T.	T.					2.73	
Chatham I.....	do.....		*	.15					.13		*	.06	.70			.14	1.47							*	.22								2.87
Elizabeth.....	Coast.....	T.		.02	.16				.09		T.	.51	.08		.07	*	1.63	.08						.23	T.	T.		T.				2.87	
Flemington.....	Raritan.....			.04	.15						.02	.71	.03		.06	.56	.64	.08						.18		T.		T.		.02		2.49	
Highwood.....	Hackensack.....	T.		.04	.10				.09		.07	.53	.06		.13	1.02	.55							.27	T.	T.		T.	T.			2.86	
Jersey City**.....	Coast.....	T.		.01	.12				.11		.04	.60	.07		.07	*	1.31	.04						.18	T.	T.		T.				2.55	
Lambertville.....	Delaware.....	T.		.17							*	.87			.17	*	1.47	.06						.22	T.	T.		T.				2.96	
Little Falls**.....	Passaic.....																																
Newark**.....	Coast.....	T.		.01	.12			.06			.39	.09	.06	.03	.02	1.41	.03							.29	T.			T.				2.51	
New Brunswick.....	Raritan.....			T.	.23	T.			.05		.02	.70	.02		.09	.64	.73	.07			T.			.18	T.	T.		T.				2.73	
New Milford.....	Hackensack.....			.06				.12			.48	.06	.02		*	.07	1.60						.20				T.					2.61	
Palisades Park.....	Hackensack.....	T.	T.	T.	.14			.12			.55	T.			*	.26	1.35	.01					.23	T.	T.	.01		T.				2.67	
Paterson.....	Passaic.....	T.		T.	.02			.14		.02	.54	.03			.12	.86	.75	.02			T.			.16	T.	T.		T.		.02		2.68	
Plainfield.....	Raritan.....	T.		.17				.09			.64	.09			.05	*	1.52	.12					.23	T.	T.		T.		T.			2.91	
Pompton Plains I.....	Passaic.....			T.	.02				.04		T.	.67	T.			.09	1.47							.02	.19					.02		2.52	
Somerville.....	Raritan.....			.17				.01		.04	.72	.06			.10	.82	.83	.04					.17							.01		2.97	
South Orange.....	Rahway.....	T.		.02	.12			.22		.34		.26			.12	1.50	.05	.05					.29	T.	T.		T.					2.97	
Woodcliffe Lake.....	Hackensack.....							.13		.43					*	.10	1.37						.18									2.21	
New York, N. Y***.....	Coast.....	T.	T.		.01	.14			.10		.62	.08	.03		.07	1.28	.02	.01		T.				.19	T.	T.		T.				2.55	
<i>The Southern Interior.</i>																																	
Bridgeton.....	Coast.....	T.			.85						.05	.90			.15	.40	*	.80							.30							3.45	
Burlington.....	Delaware.....			.32							*	.82			.10	.92	.76	.05						.18		T.						3.15	
Camp Dix.....	Delaware.....	T.		.30						.41	.44				.14	\$		*						.13								\$	
Clayton.....	Maurice.....	.01		T.	.53	T.				.02	\$				.13	.82	.02	*					.28					T.				\$	
Hammonton.....	Mullica.....			.54						*	1.08				.11	.54	.73	.01					.22									3.23	
Hightstown.....	Raritan.....	.02		.01	.28	.01			.02		T.	.88			.19	.86	.88	.04	.04					.15	T.	T.		T.				3.38	
Indian Mills.....	Mullica.....	T.		T.	.35					.04	.85	T.			.06	.60	.84	.02					.22	T.	T.		T.					2.98	
Lakewood.....	Metedeconk.....	T.		T.	.38			.06		T.	.98				.18	.84	.50	T.					.29	T.	T.		T.					3.23	
Moorestown.....	Delaware.....			.30						T.	.83				.09	.82	.87	.05					.12	T.								3.08	
Northfield.....	Coast.....			1.15				.02		.05	.60	.01			.13	1.11	1.12	.01					.02		.11							4.33	
Pleasantville.....	Coast.....			1.21				T.		.03	.64				.09	1.21	1.13				T.			.13								4.44	
Trenton***.....	Delaware.....	T.	T.	T.	.21		.01		T.	.57	.02	T.			.19	1.44	.03	.02					.12	T.	T.		T.					2.91	
Tuckerton.....	Coast.....			.10				.02		.10	1.55				.10	1.35	1.38	.02					.17	T.								4.79	
Vineland.....	Maurice.....			.88						.01	.98				*	.47	.61	.01					.24									3.20	
Woodbine.....	Coast.....																																
Philadelphia, Pa.....	Delaware.....	T.			.01	.31			T.		1.03	.04			.04	1.59	.02	T.						.13	T.			T.				3.17	
<i>The Sea Coast.</i>																																	
Asbury Park.....	Coast.....	T.			.36				.03	.01	\$	\$	T.		.18	\$	\$		T.					.29	T.	T.						\$	
Atlantic City***.....	do.....	T.		.06	1.11			.02			.35	.05	T.		.10	1.58	.10	T.				.03		.10								3.50	
Cape May City.....	do.....	.01		T.	1.72				.02		.02	.44	.01		.15	.86	1.03							.21					T.			4.45	
Long Branch**.....	do.....	.01		.01	.36			.09	.03		1.07	T.	.01		.17	2.70	.09	.01						.17	T.	T.		T.				4.72	
Sandy Hook***.....	do.....	.01	T.	T.	.29			.04	.01		.83	.05	T.		.05	1.21	.01	.01					.10	T.	T.		T.					2.64	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded.

|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.

* Precipitation included in the next following measurement. ** Precipitation for 24-hour period from midnight to midnight.

T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.			Moisture.		Sunshine.
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.		Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	
						Miles per hour.	Direction.	Date.			Percentage of possible sunshine.
Atlantic City.....	30.05	30.36	22	29.06	24	9	28	nw.	24	73	65
Cape May City.....	30.07	30.36	22	29.80	24	11	36	nw.	24	73	65
Long Branch.....							70	e.	16	68*	47
Newark.....	30.01	30.37	22	29.70	24	19	62	nw.	24	62	60
New York, N. Y.....	30.00	30.36	22	29.70	24						
Palisades Park.....	30.06	30.39	22	29.71	16	11	37	nw.	24	72	61
Philadelphia, Pa.....	30.01	30.37	22	29.68	24	17	61	s.	11	76	68
Sandy Hook.....	30.02	30.35	22	29.64	24	13	48	w	25	69	51
Trenton.....											

§ Two directions and dates

* 7 a. m. † 9 p. m.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.
<i>The Highlands and Kittatinny Valley.</i>																																
Belvidere.....	Maximum...	36	49	61	64	54	68	83	74	64	57	72	60	57	65	56	44	54	55	66	71	69	70	76	66	46	45	70	65	60	69	61.5
	Minimum...	27	20	27	...	46	45	42	50	...	41	44	44	40	34	50	42	39	33	31	32	48	34	35	46	25	29	32	36	40	36	37.1 ^b
Charlotteburg.....	Maximum...	35	40	54	56	46	62	72	64	47	45	65	63	54	55	50	40	51	49	55	66	62	64	69	65	45	44	62	58	51	...	54.0 ^a
	Minimum...	18	18	29	37	42	41	38	44	37	38	41	41	31	32	33	36	38	31	33	26	47	35	29	43	22	26	35	26	40	37	31.1
Dover.....	Maximum...	33	44	59	62	52	65	80	68	51	49	68	61	56	60	49	42	56	53	62	61	67	70	73	54	42	42	68	61	42	66	57.8
	Minimum...	19	19	29	41	42	41	44	47	39	32	43	46	40	35	39	38	40	35	32	31	40	35	36	35	24	27	35	31	52	35	35.7
Layton.....	Maximum...	22	29	32	36	42	37	41	42	42	41	43	48	38	59	51	42	52	52	63	69	65	69	69	55	41	41	67	63	56	65	58.3 ^a
	Minimum...	30	41	56	60	57	65	80	75	63	49	68	58	38	29	39	38	39	30	30	29	43	27	28	37	21	25	28	27	39	35	34
Newton.....	Maximum...	17	15	28	40	43	40	45	47	41	39	42	36	41	35	38	36	39	36	32	36	46	35	...	44	22	23	39	64	54	63	58.8
	Minimum...	34	46	59	65	53	68	84	72	59	59	70	61	57	63	50	43	53	56	65	72	65	69	76	67	43	45	70	65	56	67	60.4
Phillipsburg.....	Maximum...	21	21	30	42	46	45	44	50	41	41	44	46	44	36	42	40	41	37	35	34	48	36	37	36	27	29	36	38	42	38	38.2
	Minimum...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sussex.....	Maximum...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Minimum...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<i>The Red Sandstone Plain.</i>																																
Bergen Point.....	Maximum...	37	47	60	65	55	62	70	63	...	48	70	64	60	61	52	47	58	55	63	70	65	65	69	54	45	...	67	63	59	63	59.2 ^b
	Minimum...	22	21	30	43	43	44	49	42	...	40	45	49	45	38	41	39	43	38	36	39	56	39	39	44	28	...	28	39	44	39	39.4 ^b
Boonton§§.....	Maximum...	34	44	59	61	51	65	78	69	51	61	70	60	58	60	46	44	57	53	...	66	66	68	73	52	43						

§§ Instruments are read in the morning; the maximum temperature then read is charged



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WEATHER BUREAU
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CLIMATOLOGICAL DATA

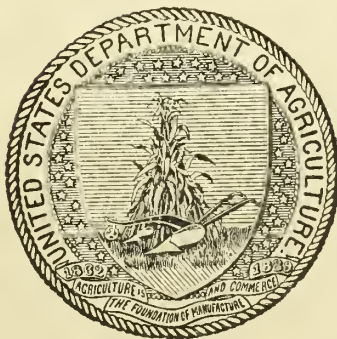
NEW JERSEY SECTION

JUNE, 1919.

BY

G. HAROLD NOYES

METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
JULY 23, 1919.

Departure of the Mean Temperature from the Normal, June, 1919.



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

VOL. XXIV. TRENTON, N. J., JUNE, 1919. No. 6.

GENERAL SUMMARY.

As a whole, the month of June was ideal for out-of-door pursuits. The temperature averaged slightly above normal and the precipitation somewhat below normal. The monthly mean temperature for the State was 69.5° and this was the highest for the past ten years. Temperatures averaged below normal along the coast and in the three counties in the southwestern portion of the State. The greatest excess from the normal occurred in the northwestern portions of the State. The first week was the hottest period of the month, the temperatures being the highest on the 3d and 4th in nearly all portions, except the coast. The hot wave was broken on the 6th by a moderate fall of rain which lasted nearly all day and was very beneficial for agriculture. On the 8th the temperature fell considerably and remained below normal for three days. From the 13th to the 25th temperatures averaged slightly above normal and the last three days of the month were considerably below normal, especially on Sunday, the 29th, when the temperature was unusually low and a moderate northerly wind prevailed. Light frost occurred on the cranberry bogs on the 30th.

The precipitation was considerably deficient over all portions of the State, except the Highlands and the extreme southwestern counties. The rain was usually attended by thunderstorms and amounts differed considerably within short distances. The rain occurred more regularly over the Highlands and was evenly distributed, while over the southern and central portions, amounts varied considerably, and occurrences were irregular. Absence of rain persisted at a few locations for ten days or more, and as a result agriculture was beginning to suffer.

The mean stage of the Delaware River at Phillipsburg was 4 feet. At Trenton the mean daily stage was 1.4 feet which was 0.5 foot below normal; the highest stage was 2.4 feet on the 3d.

The temperature departure from the normal for the year 1919, to date, by sections is: The Highlands, $+2.4^{\circ}$; Red Sandstone Plain, $+2.5^{\circ}$; Southern Interior, $+2.5^{\circ}$; The Seacoast, -2.2° . The precipitation accumulated departure from the normal for the year 1919 to date is: The Highlands, $+1.07$ inches; Red Sandstone Plain, $+0.63$ inch; Southern Interior, $+0.75$ inch; The Seacoast, $+1.61$ inches.

Storm warnings were displayed on the coast on the 28th.

TEMPERATURE.

The monthly mean temperature of the State, as deduced from observations of 38 stations, was 69.5° which was 0.3° above normal. The highest temperature was 99° at Phillipsburg and Little Falls on the 3d and 4th respectively, and the lowest, 37° at Culvers Lake on the 29th. The highest monthly temperature was 72.6° at Burlington, and the lowest, 64.8° at Long Branch. The greatest daily range of temperature was 47° at Indian Mills on the 2d.

PRECIPITATION.

The average total rainfall of the State, as deduced from observations of 44 stations, was 3.16 inches, which was 0.60 inch below normal. The greatest monthly quantity of rain fell at Culvers Lake, 6.45 inches, and the least, 1.15 inches at Cape May. The greatest amount of rain in 24 consecutive hours was 5.58 inches at Bridgeton on the 27th. The average number of

days on which 0.01 inch or more rain fell was 8, which was 1 less than normal.

WIND.

The prevailing wind direction for the month was from the South, with an approximate velocity of 9 miles per hour, which was about normal. The highest velocity for the month, sustained for five consecutive minutes was 49 miles per hour from the Northwest on the 20th, at Sandy Hook, also 49 miles per hour from the northeast on the 29th at Long Branch.

SUNSHINE AND CLOUDINESS.

The average number of clear days throughout the State was 16, which was 4 more than normal; partly cloudy, 7, which was 4 less than normal; cloudy, 7, which was normal. The approximate per cent. of possible sunshine was 63, probably about a normal value.

MISCELLANEOUS.

The mean atmospheric pressure, reduced to sea level, was 30.13 inches, which was 0.15 inch above normal. The highest readings occurred on the 30th, and the lowest on the 12th.

Thunderstorms occurred in some portions of the State on the 6th, 11th, 14th, 15th, 17th, 20th, 27th, 28th, and 29th. Hail occurred on the 17th and 20th. The Aurora was observed on the 2d at Layton. Solar Halos were observed on the 22d, 25th, 29th, and 30th. Fog was observed on the 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th, 12th, 14th, 15th, 16th, 17th, 18th, and 19th. Light haze prevailed on the 1st, 2d, 3d, and 4th.

HAIL.

June 17th, Flemington, hail about the size of peas lasting but a few minutes and did very little damage.

June 20th, Montague, Sussex County a severe hail storm lasting about a half hour caused heavy damage to agriculture and glass sash. Storm path about 5 miles long and one half mile wide and the hail stones about as large as marbles and walnuts. Damage estimated between \$8,000 and \$10,000.

June 20th, Paterson, hail about the size of peas lasting but a few minutes did about \$1,000 worth of damage.

COMPARATIVE DATA FOR JUNE.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more prec.
1885.....	68.7	97	39	1.79	3.37	0.72	.....	.....	.....	.....
1886.....	67.1	91	41	3.38	5.79	2.22	.....	.....	.....	.....
1887.....	68.2	97	42	6.77	10.29	4.21	.....	.....	.....	.....
1888.....	70.8	99	39	2.59	5.69	1.67	.....	.....	.....	.....
1889.....	69.9	91	40	3.73	6.75	2.39	.....	.....	.....	.....
1890.....	70.7	95	42	3.59	5.16	0.99	11	13	6	10
1891.....	69.7	102	38	2.92	6.71	1.24	14	9	7	5
1892.....	72.4	98	44	3.85	6.12	1.58	10	12	8	11
1893.....	69.7	103	40	2.95	7.02	0.46	10	11	9	8
1894.....	70.6	102	35	2.28	5.90	0.99	14	11	5	9
1895.....	71.7	103	39	3.24	5.99	0.93	11	11	8	10
1896.....	68.1	96	37	5.46	13.45	2.64	12	10	8	10
1897.....	66.1	95	35	3.38	5.50	2.12	10	13	7	10
1898.....	70.1	100	38	2.10	3.54	1.13	14	12	4	8
1899.....	72.3	103	38	2.50	4.34	1.01	15	10	5	7
1900.....	70.4	97	39	3.08	4.91	1.10	12	12	6	8
1901.....	70.0	103	35	1.57	4.36	0.73	18	8	4	5
1902.....	67.5	99	37	6.57	10.21	4.54	14	11	5	11
1903.....	64.0	92	37	7.68	15.02	2.39	6	10	14	15
1904.....	68.6	100	34	3.13	5.44	1.91	13	10	7	12
1905.....	68.3	96	35	3.43	8.71	1.67	11	12	7	10
1906.....	70.4	98	38	4.48	9.18	1.45	11	11	8	12
1907.....	64.7	96	31	4.41	6.85	3.15	12	10	8	10
1908.....	69.9	99	35	2.32	4.63	0.77	16	12	2	4
1909.....	70.0	99	36	3.26	5.70	1.71	9	10	11	12
1910.....	66.9	95	34	5.17	8.01	2.66	9	10	11	13
1911.....	68.9	97	40	5.36	10.11	2.84	9	12	9	14
1912.....	68.0	98	33	1.94	3.61	0.91	9	12	9	8
1913.....	69.1	98	31	1.80	3.76	0.68	19	8	3	5
1914.....	68.5	98	35	2.66	4.85	1.09	16	9	6	7
1915.....	67.0	95	36	3.12	6.51	1.40	13	10	7	11
1916.....	64.7	87	36	4.20	5.99	2.22	10	9	11	13
1917.....	68.9	95	40	4.27	7.14	2.80	13	10	7	12
1918.....	66.3	96	32	3.43	6.21	1.35	15	9	6	8
1919.....	69.5	99	37	3.16	3.53	1.15	16	7	7	8

Climatological data for June, 1919.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.							Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation of in. or more.	Clear.	Pt. cloudy.	Cloudy.		
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	28	69.8	+0.8	97	3	46	29	37	5.39	+0.99	2.21	0	8	21	3	6		Samuel J. Hixson. George S. Briggs. Brice E. Riker. William C. Harris.
Charlotteburg.....	Passaic.....	719	27	65.8	+0.3	95	3	38	30	45	3.48	-0.78	.....	0	6	22	4	4	e.	
Culvers Lake†.....	Sussex.....	848	18	.....	.....	.....	.....	37	29	.....	6.45	+2.61	2.07	0	11	22	2	6	se.	
Dover.....	Morris.....	600	35	68.0	+0.8	95	3	44	23†	37	4.17	+0.05	1.43	0	8	10	14	6	.....	
Layton.....	Sussex.....	480	19	69.4	+3.1	98	3	40	23†	45	4.08	+0.66	0.90	0	10	18	3	9	s.	A. M. Depue. Irving G. Kern. D. Wilson Smith.
Newton.....	Sussex.....	769	33	69.8	+2.1	94	3	45	29	35	5.10	+1.31	2.24	0	10	18	7	5	se.	
Phillipsburg.....	Warren.....	363	37	71.2	+1.5	99	3	47	29	40	4.61	+0.46	1.46	0	10	19	5	6	s.	
Means and extremes.....				69.0	+1.4	99	3	37	29	45	4.75	+0.76	2.24	0	9	19	5	6	s.	
<i>The Red Sandstone Plain.</i>																				
Bergen Point††.....	Hudson.....	37	22	69.8	+1.0	96	4	49	9	36	3.02	-0.93	0.92	0	6				se.	William H. Mitchell. J. W. Demmers. George Shields. L. B. Bonnett.
Boonton.....	Morris.....	400	29	68.6	.....	97	3	43	23	38	2.32	-1.42	1.26	0	10	24	0	6	sw.	
Chatham.....	Morris.....	330	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	.....	.....	.....	.....	.....	
Elizabeth.....	Union.....	45	40	70.4	-0.8	97	3	47	23†	42	3.43	-0.17	.....	0	6	14	10	6	se.	
Flemington.....	Hunterdon.....	140	31	71.4	+2.3	96	3	48	30	41	3.96	-0.41	1.25	0	10	18	7	5	sw.	Hiram E. Deats. Charles J. Bates. S. K. Pearson, Jr. Thomas R. Hunt.
Highwood.....	Bergen.....	90	30	68.8	+0.5	94	4	45	23	37	3.47	-0.31	1.70	0	7	15	9	6	se.	
Jersey City.....	Hudson.....	10	20	72.0	+2.0	95	2†	53	29	37	2.84	-0.46	1.45	0	5	11	14	5	s.	
Lambertville.....	Hunterdon.....	80	32	69.0	-1.3	92	3	46	29†	36	4.18	-0.10	1.88	0	6	13	9	8	s.	
Little Falls.....	Passaic.....	180	16			99	4	48	22	41	2.17	-2.11	0.85	0	8	16	7	7	e.	Montclair Water Co. Prof. William Wiener. N. J. Experiment Station. Hackensack Water Co.
Newark.....	Essex.....	159	77	69.6	-0.1	95	2	48	29	39	2.73	-0.90	1.32	0	7	15	8	7	se.	
New Brunswick.....	Middlesex.....	110	66	70.2	+0.6	94	4	48	29†	39	5.31	+1.54	1.68	0	9	21	4	5	sw.	
New Milford.....	Bergen.....	.....	.....	.....	.....	94	3†	46	30	37	1.67	.....	0.84	0	5	.....	.....	.....	.....	
Palisades Park.....	Bergen.....	80	4	69.0		95	4	45	23†	40	2.62		1.50	0	8	13	12	5	s.	George P. Kirsten. Marion T. Probert. John C. Sutphen. M. S. Taylor
Paterson.....	Passaic.....	80	48	72.0	+1.9	98	3†	49	29	37	2.00	-2.32	0.85	0	7	4	2	24	sw.	
Plainfield.....	Union.....	100	32	68.9	-0.4	95	3	47	30	42	3.54	-0.59	1.48	0	10	19	6	5	s.	
Pompton Plains.....	Morris.....	195	17	.....	.....	.....	.....	.....	.....	.....	3.12	-1.04	1.44	0	6	.....	.....	.....	.....	
Somerville.....	Somerset.....	60	37	69.6	+0.4	97	3	44	13†	45	2.81	-1.34	1.28	0	9	16	9	5	sw.	A. A. Macdonald. Dr. W. J. Chandler. Hackensack Water Co. U. S. Weather Bureau.
South Orange.....	Essex.....	200	49	69.7	+0.9	93	4	49	23†	36	3.27	-0.29	1.63	0	6	15	10	5	w.	
Woodcliff Lake.....	Bergen.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2.84	.....	1.83	0	6	.....	.....	.....	.....	
New York, N. Y.....	.....	365	49	69.7	+1.2	92	4	52	29	34	2.23	-1.03	0.95	0	6	10	11	9	s.	
Means and extremes.....				70.1	+0.6	99	4	43	23	45	3.07	-0.72	1.88	0	7	15	8	7	sw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	38	71.0	-2.4	94	3	49	30	31	5.56	+1.79	3.58	0	6	25	0	5	sw.	Henry A. Jorden. D. S. B. McCoy. U. S. Army. Melvin F. Wills.
Burlington.....	Burlington.....	12	33	72.6	+1.9	98	3	49	30	35	1.69	-2.23	0.50	0	7	24	1	5	nw.	
Camp Dix.....	Burlington.....	.....	1	69.8	.....	95	3	42	13†	40	1.98	.....	0.47	0	8	14	8	8	s.	
Clayton.....	Gloucester.....	126	27	71.2 ^a	-0.2	98	3	46	13†	42	3.41	+0.01	1.16	0	7	.....	.....	.....	sw.	
Hammononton.....	Atlantic.....	103	17								3.13	-0.06	2.15	0	7	20	5	5	s.	G. H. Parkhurst. Rev. W. A. Stanton. James M. Armstrong. R. W. Holman.
Hightstown.....	Mercer.....	120	26	70.5	+1.1	95	3	46	30	36	2.20	-1.81	0.91	0	8	16	9	5	se.	
Indian Mills.....	Burlington.....	76	30	69.8	-1.2	98	3	42	30	47	3.83	+0.04	2.24	0	7	15	9	6	se.	
Lakewood.....	Ocean.....	54	16	68.8	+1.2	95	4	43	30	39	2.62	-1.05	1.05	0	8	17	5	8	s.	
Moorestown.....	Burlington.....	75	57	70.5	+0.3	95	3	47	30	37	1.73	-2.07		0	9	16	9	5	nw.	Geo. L. Gillingham. William L. Flick. Lincoln Van Gilder. U. S. Weather Bureau.
Northfield.....	Atlantic.....	25	12	.....	.....	.....	.....	.....	.....	.....	1.95	-1.62	0.87	0	7	.....	.....	.....	.....	
Pleasantville.....	Atlantic.....	26	21	.....	.....	.....	.....	.....	.....	.....	2.04	-1.55	.....	0	8	19	4	7	.....	
Trenton.....	Mercer.....	190	48	70.8	+1.3	96	3	50	29	35	1.39	-2.10	0.62	0	6	8	12	10	s.	
Tuckerton.....	Ocean.....	23	26	68.9	-0.1	92	4	42	13	43	2.66	-1.11	1.07	0	7	17	8	5	se.	Frank R. Austin. H. C. Himes. Jos. H. Cohen. U. S. Weather Bureau.
Vineland.....	Cumberland.....	109	51	71.0 ^g	-0.6	96	3	49	30	.....	2.41	-1.17	0.63	0	7	.....	.....	.....	.....	
Woodbine.....	Cape May.....	43	28	69.8 ^a	+0.8	91	3	44	13†	33	.....	.....	.....	0	.....	9	11	10	s.	
Philadelphia, Pa.....	.....	117	49	72.0	+0.8	97	3	53	29	28	2.19	-1.11	0.57	0	8	11	10	9	s.	
Means and extremes.....				70.4	+0.2	98	3	42	13†	47	2.61	-0.99	3.58	0	7	17	7	6	s.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	30	65.1 ^o	-3.1	86	24	48	9	24	4.53	+0.73	2.26	0	7	13	11	6	ne.	Miss Dorothy A. Alexander. U. S. Weather Bureau. U. S. Weather Bureau. William D. Martin, Jr. U. S. Weather Bureau.
Atlantic City.....	Atlantic.....	16	46	66.4	-0.4	84	3	52	30	25	2.90	-0.13	1.50	0	10	13	8	9	s.	
Cape May City.....	Cape May.....	17	35	67.4	-0.3	85	3	50	30	29	1.15	-1.89	0.61	0	7	11	8	11	s.	
Long Branch.....	Monmouth.....	25	12	64.8	-2.7	87	24	50	30	29	2.70	-1.20	1.91	0	8	17	8	5	s.	
Sandy Hook.....	Monmouth.....	22	21	68.0	-0.4	87	4	55	29	27	2.50	-1.47	1.66	0	7	12	13	5	se.	
Means and extremes.....				66.3	-1.2	87	4†	48	9	29	2.76	-1.08	2.26	0	8	13	10	7	s.	
For the State.....				69.5	+0.3	99	3†	37	29	47	3.16	-0.60	3.58	0	8	16	7	7	s.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

†† Received too late to be included in the means.

Reference letters, *, b, °, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Pleasantville is Atlantic City; Milford and Woodcliff Lake are Hackensack.

Daily precipitation for June, 1919.

Stations.	Watershed.	Day of month.																														Total.		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		31	
<i>The Highlands and Kittatinny Valley.</i>																																		
Lyndere.....	Delaware.....						1.04		.56	.08		.52				.31					.37							.30	2.21				5.39	
Charlotteburg.....	Passaic.....						T.		.37						T.	.40	T.				.27						*		2.44			3.48		
Walters Lake.....	Delaware.....						.70		.25	.02		.18				.01	1.84				.67	.70						.55	1.52	.01			6.45	
Over.....	Passaic.....						.09		*	.05						1.43		.06			.52							.69	1.33				4.17	
Newton.....	Delaware.....						.64		.84	.05		.08			.03	.71	.02				.22							.59	.90				4.08	
Phillipsburg.....	do.....						.87	T.	.22	.08		.03				.96					.38	.06						.24	2.24	.02			5.10	
Essex.....	Hudson.....						.89		.13	.10		.37				.01	.55		.13		.60						T.	.37	1.46				4.61	
<i>The Red Sandstone Plain.</i>																																		
Bergen Point.....	Coast.....						.12		T.	.17											.81							.20	.80	.92			3.02	
Monton Hill.....	Passaic.....							.10		.02	.24	T.	.01			T.	.01		.04			.22						.09	.33	1.26			2.32	
Matham Hill.....	do.....																																	
Elizabeth.....	Coast.....						.17		T.	.06		T.									.80							.15	1.18	1.07			3.43	
Emmington.....	Raritan.....						.90		.03	.04		.23				.02		1.25			.40							.26	.80	.03			3.96	
Highwood.....	Hackensack.....						T.		.04	.34		.13						T.			.87							.28	1.70	.11			3.47	
Rose City**.....	Coast.....						.07	T.	.10		T.										1.45							.17	1.05	T.			2.84	
Amberlyville.....	Delaware.....			T.			.67		T.	.03	T.	T.						.53			.57							.50	1.88				4.18	
Little Falls.||||	Passaic.....							.06		.09	.16								.08			.70						.12	.11	.85			2.17	
Newark**.....	Coast.....						.01		.08	.12		T.									1.05						.02	.13	1.32				2.73	
New Brunswick.....	Raritan.....						.93	.03	.02	.12									1.00			.44						.16	.93	1.68			5.31	
New Milford.....	Hackensack.....							.03	.22												.27							.31	.84				1.67	
Palisades Park.....	Hackensack.....						.01		*	.07	.06	.07							T.		1.50							.17	.74				2.62	
Paterson.....	Passaic.....						.03		T.	.20					T.			.02			.85							.17	.35	.38			2.00	
Patersonfield.....	Raritan.....						.24		.11	.06	.02					.01		.56			.50							.27	1.48	.29			3.54	
Paterson Plains||	Passaic.....								T.	T.	.29								.11			1.44						.18	.16	.94			3.12	
Patersonville.....	Raritan.....						.31		T.	.03								.13	.05		.54	.04						.31	1.28	.12			2.81	
Paterson Orange.....	Rahway.....						.03		.25	.12	T.										.92							.32	1.63				3.27	
Paterson Lake.....	Hackensack.....							.07	.13									.03			.53							.25	1.83				2.84	
<i>New York, N. Y.**</i>																																		
Coast.....	Coast.....						.08	T.	.09	.15		T.									.77							.19	.95				2.23	
<i>The Southern Interior.</i>																																		
Bridgeton.....	Coast.....						.32		.30			.02									.28							1.06	3.58				5.56	
Burlington.....	Delaware.....						.50												.05		.39	.01						.36	.06	.32			1.69	
Camp Dix.....	Delaware.....						.43		.02	.01								.27			*	.33						.45	.47				1.98	
Clayton.....	Maurice.....						.18		.18			.04						T.			.81							1.04	1.00	.16			3.41	
Hammononton.....	Mullica.....						.35		.06			.06						.07			.08							.36	2.15				3.13	
Highstown.....	Raritan.....						.91		.22	.01								.15					.32					.19	.33	.07			2.20	
Indian Mills.....	Mullica.....						.35		.05			.26						T.			.26							.50	2.24	.17			3.83	
Lakewood.....	Metedeconk.....						.21		.06	.06			.05								.27							.37	1.05	.55			2.62	
Loosestown.....	Delaware.....						.26	.07	T.	.05			.03					.12			.39							.53	.13	.15			1.73	
Northfield.....	Coast.....						.21		.02			.02											.36					.11	.87	.36			1.95	
Peasantryville.....	Coast.....						.21		.03			.06									.22	.01						.10	.91	.50			2.04	
Paterson***.....	Delaware.....						.25	T.	.03	T.		T.					T.	T.	.03		.29							.17	.62				1.39	
Paterson.....	Coast.....						.24		.04	.02											.13							.23	1.07	.93			2.66	
Patersonland.....	Maurice.....						*		*	.56	T.		.01								.55	.62	.63	T.				.55	.62	.63	T.		2.41	
Patersonbine.....	Coast.....						.24		T.												T.							\$	\$	.13			\$	
Philadelphia, Pa..	Delaware.....						.44	T.	.02	T.		.39				.05		.01			.43							T.	.49	.36				2.19
<i>The Sea Coast.</i>																																		
Asbury Park.....	Coast.....						.45	*	.15												.91							.76	*	2.26			4.53	
Atlantic City***.....	do.....						.46	.01	.01	.01							.01	.01			.22							.47	1.17	.53			2.90	
Aspe May City.....	do.....						.24	.04		.01			.05								.01							.19	.61	T.			1.15	
Long Branch**.....	do.....						.16		.01	.09		.01									.49							.03	1.01	.90			2.70	
Long Branch***.....	do.....						.12	.01	.03	.04											.51							.13	1.66				2.50	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded.

|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.

* Precipitation included in the next following measurement. ** Precipitation for 24-hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.			Moisture.		Sun- shine	
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	Percentage of possible sunshine
							Miles per hour.	Direction.	Date.			
Atlantic City.....	30.14	30.50	12	29.75	28	7	36	e.	28	82	86	65
Cape May City.....	30.17	30.48	12	29.82	27	7	30	ne.	28			
Long Branch.....							49	ne.	29			
Newark.....	30.12	30.49	12	29.78	27	10	48	n.	20	74	69	63
New York, N. Y.....	30.11	30.48	12	29.77	27							
Palisades Park.....	30.14	30.52	12	29.80	27	9	33	ne.	28	76	60	59
Philadelphia, Pa.....	30.13	30.52	12	29.77	27	12	49	n.w.	20	81	81	69
Sandy Hook.....	30.13	30.52	12	29.77	27	12	49	n.w.	20	81	81	69
Trenton.....	30.12	30.48	12	29.78	27	9	34	ne.	28	75	66	57

Daily temperatures for June, 1919.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.
The Highlands and Kittatinny Valley																																
Belvidere.....	Maximum...	82	93	97	95	87	72	86	65	65	78	87	87	76	83	87	82	87	83	83	85	86	75	80	87	80	77	75	73	71	80	81.4
	Minimum...	53	56	64	64	66	63	65	58	54	57	61	61	53	56	62	59	65	64	59	57	62	57	47	56	62	66	69	57	46	49	58.2*
Charlotteburg.....	Maximum...	79	91	95	93	84	75	86	62	59	78	83	80	85	84	75	78	87	78	82	79	79	75	78	79	78	73	79	74	69	76	79.1
	Minimum...	43	49	58	56	56	60	60	56	50	54	51	58	40	44	54	49	57	56	49	56	59	43	36	54	60	63	66	53	45	38	52.4
Dover.....	Maximum...	77	91	95	94	86	72	87	68	58	76	82	77	83	85	81	79	34	77	81	84	83	74	78	88	79	75	73	70	67	80	79.5
	Minimum...	49	54	64	62	65	66	67	55	52	55	56	60	46	50	58	55	58	62	55	63	63	49	44	59	61	63	55	55	46	44	56.4
Layton.....	Maximum...	83	95	98	95	87	78	87	70	62	81	85	80	85	88	84	84	89	84	82	87	85	75	82	88	79	74	78	73	72	84	82.5
	Minimum...	46	50	58	61	61	63	64	57	52	57	59	60	50	52	60	60	61	66	54	63	63	45	40	55	59	64	67	55	40	43	56.2
Newton.....	Maximum...	83	90	94	93	88	81	83	82	72	78	81	82	81	85	81	80	83	80	81	83	83	78	78	84	82	78	74	70	67	77	81.0
	Minimum...	55	55	67	68	66	64	56	52	55	61	60	65	56	60	57	61	63	57	63	62	52	49	57	62	66	58	54	45	47	58.6	
Phillipsburg.....	Maximum...	83	96	99	97	89	72	90	69	63	80	84	78	85	90	85	86	88	83	86	87	86	76	82	90	80	78	75	74	74	83	82.9
	Minimum...	57	56	65	67	67	67	66	57	54	57	61	61	53	55	63	60	64	64	60	63	63	54	49	57	63	66	66	58	47	48	59.6
Sussex.....	Maximum...																															
	Minimum...																															
The Red Sandstone Plain.																																
Bergen Point.....	Maximum...	76	92	92	96	88	78	88	77	61	73	85	75	85	81	82	79	80	79	76	85	86	71	76	89	81	79	76	65	67	75	79.8
	Minimum...	60	56	64	64	64	64	66	58	49	56	63	67	55	59	61	59	60	59	59	62	63	60	59	59	60	66	66	58	51	51	59.9
Boonton§§.....	Maximum...	80	95	97	93	85	74	88	61	60	80	86	82	88	86	83	82	87	80	81	85	86	76	79	87	82	77	74	73	73	82	81.4
	Minimum...	50	51	62	60	63	62	63	58	53	53	55	61	45	48	57	50	54	60	54	59	61	51	43	59	59	65	66	58	47	44	55.7
Elizabeth.....	Maximum...	78	95	97	96	89	80	89	79	70	77	86	80	87	84	82	84	86	80	83	86	88	78	81	91	83	78	77	75	72	79	82.7
	Minimum...	53	53	63	63	65	63	66	58	54	57	59	61	49	50	56	56	59	64	57	61	62	53	47	57	63	71	69	57	49	47	58.1
Flemington.....	Maximum...	78	95	96	93	87	85	91	83	60	78	82	82	87	87	83	86	88	80	83	87	87	83	82	87	83	76	75	76	73	82	83.2
	Minimum...	56	54	66	60	66	65	68	59	55	57	60	61	51	54	62	59	60	65	60	61	62	55	51	59	61	67	69	60	50	48	59.6
Highwood.....	Maximum...	74	90	92	94	87	75	90	79	58	77	82	79	84	81	76	83	83	80	82	83	86	78	81	90	81	76	73	70	69	80	80.4
	Minimum...	49	53	62	61	68	57	67	57	53	56	56	61	48	51	58	52	58	62	58	63	62	49	45	57	64	67	67	57	50	46	57.1
Jersey City.....	Maximum...	78	95	95	94	88	79	89	83	61	73	85	78	88	82	80	81	80	78	78	86	90	88	82	92	87	78	76	77	73	76	82.3
	Minimum...	58	58	68	66	69	66	66	59	55	58	61	63	56	60	62	61	63	65	63	64	65	58	55	64	69	67	69	60	53	56	61.7
Lambertville.....	Maximum...	77	91	92	89	83	75	84	82	62	74	81	77	82	82	81	81	86	74	79	84	82	73	77	84	79	74	72	68	76	79.2	
	Minimum...	61	55	64	64	66	65	68	57	55	57	60	61	50	53	58	60	60	64	57	59	63	52	50	56	64	67	68	59	46	46	58.8
Little Falls.....	Maximum...	84	97	96	99	93	79	94	68	61	85	86	89	94	86	84	89	85	86	90	90	92	83	81	93	86	83	80	78	81	87	86.2*
	Minimum...	55	65	64	69	66	69	60	54	55	60	62	52	53	57	55	60	63	58	62	65	55	48	58	66	69	69	59	51	49	56	59.5
Newark.....	Maximum...	74	95	94	94	86	75	88	74	57	73	82	78	84	79	76	80	81	73	75	83	84	76	78	88	78	74	70	70	69	79	78.9
	Minimum...	59	56	70	69	68	66	66	56	53	56	56	59	55	58	61	60	63	64	59	62	65	59	55	64	66	66	62	55	48	53	60.4
New Brunswick.....	Maximum...	82	93	92	94	91	85	87	87	59	75	80	76	83	82	78	81	85	85	80	85	85	85	74	85	85	74	75	75	70	76	81.5
	Minimum...	55	54	67	64	65	64	66	58	54	56	61	59	50	54	57	58	59	63	57	61	62	57	52	64	61	63	69	59	48	48	58.8
Palisades Park.....	Maximum...	75	93	94	95	87	76	91	70	59	78	85	80	87	82	79	82	84	80	81	86	87	76	81	90	81	77	74	72	71	81	81.1
	Minimum...	52	54	63	62	67	65	67	56	54	56	58	54	47	52	58	52	59	59	57	63	63	48	45	57	64	65	64	57	45	46	57.0
Paterson.....	Maximum...	79	87	98	98	91	83	92	62	60	80	88	83	90	86	83	85	85	82	86	89	89	78	83	93	86	78	75	75	73	82	83.3
	Minimum...	57	56	68	69	69	67	67	56	56	56	60	61	53	57	59	62	60	62	60	64	68	56	50	65	71	67	68	58	49	51	60.6
Plainfield.....	Maximum...	76	91	95	93	85	76	81	69	60	75	83	78	84	84	82	80	85	75	81	84	84	76	78	88	81	76	74	72	68	78	79.7
	Minimum...	54	53	63	63	65	66	66	57	54	56	60	60	48	52	57	59	58	63	58	61	63	52	48	56	62	66	69	57	49	47	58.1
Somerville.....	Maximum...	84	95	97	94	87	84	89	87	62	79	83	80	87	86	85	85	90	79	85	88	87	86	80	91	85	78	77	75	72	81	83.9
	Minimum...	50	50	64	60	60	60	65	56	53	56	56	59	44	48	55	53	56	63	55	56	60	48	44	52	57	65	67	57	48	45	55.4
South Orange.....	Maximum...	76	92	92	93	86	77	87	72	59	76	83	78	83	81	79	81	84	79	81	85	84	76	80	88	83	77	74	72	72	78	80.3
	Minimum...	55	56	65	65	66	64	67	56	53	56	60	60	51	55	59	57	60	63	58	62	64	57	49	63	65	67	66	57	49	49	59.1
New York, N. Y.....	Maximum...	74	92	91	92	83	75	85	67	61	74	82	75	83	78	76	78	78	75	74	82	85	74	77	85	77	73	74	72	68	74	77.8
	Minimum...	59</																														



Based on 850 records.

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NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

XXIV. TRENTON, N. J., JULY, 1919. No. 7.

GENERAL SUMMARY.

The month of July was notable for the great amount of rain that fell, and for its continuity, especially from the 13th to the 22d. The total amount for the State has been exceeded in July but two instances, 1889, and 1897. Amounts exceeding 2 inches in 24 consecutive hours occurred at a large number of stations, and in a few instances, over 3 inches, and in one locality, over 6 and 7 inches. At several stations the rain fell at a rate of over an inch per day for several days. Along the southeastern coast the severity of the rain was less intense, but unfortunately that region is not likely to be affected adversely from an agricultural standpoint, by too much rain, as the bulk of staples are raised in other districts. It rained every day from the 12th to the 23d, except on the 14th. Farm lands were flooded, and great quantities of wheat and rye standing in the shock in the fields sprouted. The month was practically normal in warmth, the first and last weeks were considerably above normal, and the middle fortnight cooler. Temperatures of 100° and above occurred in practically all districts on the 4th and 5th, and the latter was attended by some suffering and general discomfort. The mean stage of the Delaware River at Phillipsburg was 2.8 feet. At Trenton the mean stage was 1.9 feet, which was 0.7 foot above normal. The highest stage, 8.0 feet, occurred on the 22d.

The temperature departure from normal for the year 1919 to date, by sections, is: The Highlands, +2.0; Red Sandstone Plain, +2.1; Southern Interior, +2.1; Sea Coast, +2.0. The precipitation accumulated departure from normal, for the year 1919 to date, by sections, is: The Highlands, +4.37; Red Sandstone Plain, +4.79; Southern Interior, +4.52; Seacoast, +5.45.

There were no storm warnings during the month.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 37 stations, was 73.5°, which was 0.1° below normal. The highest temperature was 103° at Burlington on the 4th, and the lowest, 43° at Charlotteburg on the 12th. The highest monthly mean temperature was 76.4° at Burlington; and the lowest, 68.8° at Charlotteburg. The greatest daily range of temperature was 45° at Layton on the 2d and 3d. The warmest portion of the State comprised the southwestern counties.

PRECIPITATION.

The mean total rainfall of the State, as deduced from observations of 44 stations was 8.39 inches, which was 3.84 inches above normal. The greatest monthly rainfall was 14.14 inches at Boonton, and the least, 4.45 inches at Northfield. The greatest amount of rain in any 24 consecutive hours was 7.45 inches at Boonton on the 22d-23d, and every station reported over an inch in 24 hours. The mean of the number of days on which 0.01 inch or more rain fell was 14, which was 4 more than normal.

WIND.

The prevailing wind direction was from the south, with an approximate velocity of 10 miles per hour, which was about normal. The highest velocity, sustained for 5 consecutive minutes, was 70 miles per hour from the northwest on the 26th, Long Branch.

SUNSHINE AND CLOUDINESS.

The average number of clear days throughout the State was 14, which was 2 more than normal; partly cloudy, 7, or 5 below normal; cloudy, 10, or 3 more than normal. The approximate percent. of possible sunshine was 63, which was probably a little under normal.

MISCELLANEOUS.

Mean atmospheric pressure, reduced to sea level was 30.02 inches, which was 0.04 inch above normal. Highest readings occurred on the 9th, and the lowest on the 10th-11th.

Thunderstorms occurred in some portions of the State on the 6th, 7th, and daily except on the 14th, from the 10th to the 29th. Dense fog was reported daily from the 13th to the 22d, and also on the 9th and 24th. Haze occurred on the 14th; smoke on the 23d, 24th, 25th, and 31st. A solar halo was observed on the 31st. Light hail occurred at Flemington on the 6th and 26th, at Newton on the 21st, and at Highwood on the 27th, and were of no importance.

ERRATA.

February, 1919.—Greatest daily range at Boonton recorded 30°, should read 31°. Number of days with precipitation at Northfield recorded blank, should be 9. Vine-land: Mean temperature recorded 35.6°, should read 36.1°. Departure recorded +3.1°, should be +3.6°. Asbury Park: Mean temperature recorded 33.8°, should be 34.8°. Departure recorded +1.9° should be +2.9°. Observers' names at Somerville should be A. A. McDonald; South Orange, Dr W. J. Chandler; Woodcliff Lake, Hackensack Water Co.

March, 1919.—Palisades Park: Minimum temperature, 17th, 37°, should read 38°. Plainfield: Number of clear days recorded 12, should read 13. Pompton Plains: Total snowfall recorded blank, should be Trace.

April, 1919.—Palisades Park: Total precipitation page 28 should be 2.67 instead of 2.66 inches. Greatest precipitation in 24 hours recorded 1.35 should be 1.61. Woodcliff Lake: Number of days with rain, recorded as 9, should be 6. Clayton: Total snowfall recorded as Trace should be 0.2 inch. Asbury Park: Blank the maximum temperature, date, greatest daily range, and number of days with 0.1 or more. Cape May: Minimum on the 6th should be 43 instead of 42°. Number of days with .01 or more recorded 9, should be 10. South Orange: Page 30. Mean minimum should be 39.2° instead of 48.7°.

May, 1919.—New Milford: Page 36. Greatest precipitation in 24 hours should be 1.38 instead of 1.25 inches.

Comparative data for June, 1919.—Page 43. Greatest precipitation should be 6.45 inches instead of 3.58 inches.

June, 1919.—Woodbine: Footnotes denoting incomplete rainfall should be omitted; total for the month should read, 0.37 inch. Page 43, least rainfall, 1.15 inches at Cape May should read, 0.37 inch at Woodbine.

COMPARATIVE DATA FOR JULY.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more prec.
1885.....	75.2	100	44	3.50	7.28	1.29	.....	.....	.....	.....
1886.....	73.0	98	48	4.91	7.95	2.98	.....	.....	.....	.....
1887.....	77.1	102	54	7.67	15.29	1.95	.....	.....	.....	11
1888.....	71.1	95	45	3.50	7.03	1.25	.....	.....	8	9
1889.....	73.4	95	48	10.19	18.58	4.66	.....	.....	13	14
1890.....	72.5	101	39	5.62	7.55	3.60	12	11	8	9
1891.....	70.1	95	43	5.30	9.41	3.03	10	11	10	12
1892.....	74.3	105	44	4.03	7.96	2.38	12	14	5	8
1893.....	73.9	102	40	2.72	4.63	1.26	14	13	4	8
1894.....	75.7	106	44	1.66	5.00	0.15	14	12	5	6
1895.....	70.9	99	41	4.26	7.73	1.53	12	12	7	10
1896.....	75.0	98	47	5.50	13.29	2.45	13	10	8	13
1897.....	74.1	102	50	11.42	20.80	6.11	10	11	10	15
1898.....	75.3	107	38	4.96	11.72	2.23	11	13	7	10
1899.....	74.7	98	38	5.75	9.02	3.34	13	11	7	11
1900.....	75.9	104	42	4.74	7.21	1.11	15	12	4	11
1901.....	77.3	107	45	5.87	10.92	1.89	9	13	9	14
1902.....	73.0	100	43	4.78	9.92	1.83	10	12	9	13
1903.....	73.3	100	38	5.51	10.14	3.08	16	10	5	12
1904.....	72.3	98	42	4.87	8.06	2.41	13	10	8	13
1905.....	74.4	102	42	4.06	8.19	1.67	12	13	6	12
1906.....	72.8	94	46	5.58	13.25	3.44	11	14	6	12
1907.....	73.6	96	40	2.62	6.42	0.95	8	12	11	8
1908.....	75.6	106	42	4.70	8.12	1.97	12	13	6	9
1909.....	71.6	99	36	2.12	4.03	1.03	14	14	3	5
1910.....	75.3	99	42	1.36	5.33	0.22	12	12	7	5
1911.....	76.0	104	42	3.64	6.46	2.06	12	12	7	8
1912.....	73.7	100	36	3.86	9.91	1.01	14	10	7	9
1913.....	74.4	100	41	2.52	4.72	1.50	20	9	2	8
1914.....	71.5	97	40	6.05	8.57	1.94	9	11	11	15
1915.....	72.8	98	44	5.31	11.06	2.23	10	13	8	14
1916.....	74.4	97	45	5.40	9.01	3.15	11	9	11	12
1917.....	74.2	104	46	4.83	7.93	2.38	10	11	10	12
1918.....	72.2	104	39	3.93	13.60	1.20	17	9	5	8
1919.....	73.5	103	43	8.39	14.14	4.45	14	7	10	14

Climatological data for July, 1919.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.							Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation, 0.1 in. or more.	Clear.	Pt. cloudy.	Cloudy.		
The Highlands and Kittatinny Valley.																				
Belvidere.....	Warren.....	289	28	72.8	+0.1	96	4†	49	12	44	6.92	+1.32	2.00	0	12	20	3	8		Samuel J. Hixson. George S. Briggs. Brice E. Riker. William C. Harris.
Charlotteburg.....	Passaic.....	719	27	68.8	-0.7	96	5	43	12	43	11.09	+6.21	.....	0	11	18	8	5	.....	
Culvers Lake†.....	Sussex.....	848	18	.....	.....	.....	.....	45	12	.....	7.09	+2.33	1.42	0	16	18	6	7	sw.	
Dover.....	Morris.....	600	35	70.4	-1.0	96	5	49	12	42	10.40	+4.92	3.15	0	16	8	11	12	.....	
Layton.....	Sussex.....	480	19	71.3	+1.1	99	4†	44	12	45	9.71	+5.28	1.66	0	12	16	5	10	sw.	A. M. Depue. Irving G. Kern. D. Wilson Smith.
Newton.....	Sussex.....	769	38	70.7	-0.2	93	3†	50	12	31	5.73	+1.03	1.22	0	13	15	6	10	sw.	
Phillipsburg.....	Warren.....	363	37	74.0	0.0	100	5	50	12	39	6.87	+2.02	1.22	0	14	17	5	9	sw.	
Means and extremes...				71.3	-0.1	100	5	43	12	45	8.26	+3.30	3.15	0	13	16	6	9	sw.	
The Red Sandstone Plain.																				
Bergen Point†.....	Hudson.....	37	22	73.7	+0.3	98	4†	55	1	35	4.81	-0.70	1.29	0	11	6	16	9	nw.	William H. Mitchell. J. W. Demmers. George Shields. L. B. Bonnett.
Boonton.....	Morris.....	400	29	72.4	.....	99	4	50	9†	39	14.14	+8.68	7.45	0	12	21	3	7	sw.	
Chatham.....	Morris.....	330	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	.....	.....	.....	.....	.....	
Elizabeth.....	Union.....	45	40	74.4	-1.1	100	4†	52	12	40	8.88	+3.62	2.60	0	13	13	8	10	sw.	
Flemington.....	Hunterdon.....	140	31	74.6	+0.7	101	4†	53	12	37	12.66	+7.70	2.84	0	14	17	4	10	sw.	Hiram E. Deats. Charles J. Bates. S. K. Pearson, Jr. Thomas R. Hunt.
Highwood.....	Bergen.....	90	30	72.2	-0.3	98	4†	51	12	40	7.89	+2.52	2.50	0	12	12	9	10	nw.	
Jersey City.....	Hudson.....	10	20	75.9	+1.2	102	4†	59	1†	35	7.78	+3.00	2.21	0	14	13	7	11	sw.	
Lambertville.....	Hunterdon.....	80	32	72.0	-2.5	96	4†	51	12	38	10.98	+5.94	.....	0	15	11	5	15	sw.	
Little Falls.....	Passaic.....	180	16								7.32	+1.73	2.91	0	13	10	7	14	sw.	Montclair Water Co. Prof. William Wiener. U. S. Experiment Station. Hackensack Water Co.
Newark.....	Essex.....	159	77	73.8	-0.5	101	4	54	31	30	8.83	+4.10	1.46	0	15	17	6	8	sw.	
New Brunswick.....	Middlesex.....	110	66	73.6	-0.7	98	4†	54	1†	36	8.33	+3.28	1.99	0	16	16	6	9	w.	
New Milford.....	Bergen.....	.....	.....	73.0	.....	100	4	48	12	42	6.46	.....	1.50	0	13	.....	.....	.....	.....	
Palisades Park.....	Bergen.....	80	4	72.8		100	4	52	12	40	8.81		2.17	0	15	13	8	10	s.	George P. Kirsten. Marion T. Probert. John C. Sutphen. M. S. Taylor
Paterson.....	Passaic.....	80	48	75.5†	+1.2	102	4	56	12	34	7.96	+2.63	1.87	0	11	7	4	20	se.	
Plainfield.....	Union.....	100	32	72.5	-1.4	97	5	50	12	35	8.56	+3.16	2.35	0	17	15	8	8	se.	
Pompton Plains.....	Morris.....	195	17	.....	.....	.....	.....	.....	.....	.....	12.78	+7.23	6.87	0	11	.....	.....	.....	.....	
Somerville.....	Somerset.....	60	37	73.2	-0.7	99	4†	46	12	44	12.33	+7.20	1.94	0	14	16	6	9	se.	A. A. Macdonald. Dr. W. J. Chandler. Hackensack Water Co. U. S. Weather Bureau.
South Orange.....	Essex.....	200	49	73.8	+0.7	97	4†	55	9†	29	7.44	+2.32	1.69	0	12	15	5	11	w.	
Woodcliff Lake.....	Bergen.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5.24	.....	1.15	0	10	.....	.....	.....	.....	
New York, N. Y.....	.....	365	49	74.0	+0.5	98	4	58	1	30	7.93	+3.39	3.27	0	14	8	12	11	s.	
Means and extremes...				73.6	-0.3	102	4	46	12	44	8.96	+4.16	7.45	0	13	13	7	11	sw.	
The Southern Interior.																				
Bridgeton.....	Cumberland.....	30	38	74.6	-2.5	97	4†	53	1	33	11.38	+6.95	3.16	0	14	18	3	10	se.	Henry A. Jorden. D. S. B. McCoy. U. S. Army. Melvin F. Wills.
Burlington.....	Burlington.....	12	33	76.4	+1.1	103	4	52	12	40	8.23	+3.20	1.75	0	14	18	5	8	s.	
Camp Dix.....	Burlington.....	1	.....	74.4	.....	102	5	52	9†	38	8.37	.....	1.24	0	15	8	8	15	se.	
Clayton.....	Gloucester.....	126	27	75.2	-0.8	102	4†	51	12	39	9.80	+5.53	2.65	0	12	19	8	4	sw.	
Hammononton.....	Atlantic.....	103	17								7.75	+3.06	1.82	0	16	19	9	3		G. H. Parkhurst. Rev. W. A. Stanton. James M. Armstrong. R. W. Holman.
Highstown.....	Mercer.....	120	26	74.0	0.0	100	4†	52	1†	39	8.62	+2.65	2.95	0	18	17	5	9	nw.	
Indian Mills.....	Burlington.....	76	30	73.9	-1.2	101	5	47	12	43	9.11	+5.05	1.78	0	15	13	8	10	s.	
Lakewood.....	Ocean.....	54	16	.....	.....	100	4	49	9	.....	7.71	+2.68	2.20	0	13	.....	.....	.....	.....	
Moorestown.....	Burlington.....	75	57	74.6	-0.2	99	5	54	1	35	10.10	+5.52	1.75	0	14	11	13	7	nw.	Geo. L. Gillingham. William L. Flick. Lincoln Van Gilder. U. S. Weather Bureau.
Northfield.....	Atlantic.....	25	12	.....	.....	.....	.....	.....	.....	.....	4.45	+0.52	1.06	0	14	.....	.....	.....	.....	
Pleasantville.....	Atlantic.....	26	21	.....	.....	.....	.....	.....	.....	.....	4.91	.....	1.55	0	16	19	3	9	.....	
Trenton.....	Mercer.....	190	48	75.1	+0.6	101	5	56	1	34	10.41	+5.64	2.16	0	14	10	8	13	s.	
Tuckerton.....	Ocean.....	23	26	74.2	+0.1	98	4†	48	12	40	8.72	+4.82	3.67	0	14	13	12	6	sw.	Frank R. Austin. H. C. Himes Jos. H. Cohen. U. S. Weather Bureau.
Vineland.....	Cumberland.....	109	51	76.0	-0.4	101	5	49	1	41	6.38	+1.87	1.96	0	12	18	4	9	sw.	
Woodbine.....	Cape May.....	43	28	73.7†	-0.2	98	5	46	9†	44	5.53	+1.51	1.43	0	11	10	7	14	s.	
Philadelphia, Pa.....	.....	117	49	77.2	+1.4	100	4	61	1	29	10.30	+5.97	1.98	0	15	10	8	13	s.	
Means and extremes...				74.7	-0.4	103	4	46	9†	44	8.33	+3.77	3.67	0	14	14	8	9	s.	
The Sea Coast.																				
Asbury Park.....	Monmouth.....	22	30	72.8	-0.1	98	5	56	1	29	7.29	+2.04	1.95	0	15	17	5	9	se.	Miss Dorothy A. Alexander. U. S. Weather Bureau. U. S. Weather Bureau. William D. Martin, Jr. U. S. Weather Bureau.
Atlantic City.....	Atlantic.....	16	46	73.8	+1.3	99	3	56	1	31	5.30	+1.52	1.68	0	13	15	4	12	s.	
Cape May City.....	Cape May.....	17	35	74.4	+1.0	98	3	55	1	33	5.68	+1.90	1.75	0	12	14	4	13	s.	
Long Branch.....	Monmouth.....	25	12	73.0†	+0.4	97	3	56	1	34	9.51	+4.61	3.76	0	15	16	5	10	s.	
Sandy Hook.....	Monmouth.....	22	21	73.6	+0.3	98	4	59	1	29	5.79	+1.01	1.41	0	15	13	9	9	s.	
Means and extremes...				73.5	+0.6	99	3	55	1	34	6.71	+2.22	3.76	0	14	15	5	11	s.	
For the State.....				73.5	-0.1	103	4	43	12	45	8.39	+3.84	7.45	0	14	14	7	10	s.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

†† Received too late to be included in the means.

Reference letters, *, †, ‡, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Pleasantville is Atlantic City; Milford and Woodcliff Lake are Hackensack.

Daily precipitation for July, 1919.

Stations.	Watershed.	Day of month.																															Total.	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>The Highlands and Kittatinny Valley.</i>																																		
Andover.....	Delaware.....										.15	.13				.15	.33		.41	.97	1.74	2.00	.61	.06				.28				.06	6.92	
Charlotteburg.....	Passaic.....						.65				* .42	T.				.40			*	*	*	8.58					.66		.38				11.09	
Devers Lake.....	Delaware.....						.40	.01			.19	.07		T.		.01	.15		.18	1.40	.90	1.42	1.19	.02				.01	.71	.12		.01	7.72	
Devers Lake.....	Passaic.....						.31				*	.35		.02		*	.35		1.38	*	*	1.74	2.60	3.15				*	.18	.02		*	10.40	
Wynton.....	Delaware.....						.27				.16					T.	.74		.90	1.51	.97	1.41	1.66				.35	1.36	.25		.13	9.71		
Wynton.....	Delaware.....						.33	.03			.18	.29					.13		.14	1.08	.56	1.22	.68	.04				.78	.27				5.73	
Phillipsburg.....	do.....						.03				.19		T.		.35		.27	T.	1.04	1.00	.65	1.03	.45	.04			.46	.97			.15	6.87		
Sex.....	Hudson.....																																	
<i>The Red Sandstone Plain.</i>																																		
Engen Point.....	Coast.....						.41	T.			1.29			.09		T.	.39	T.	.63	.05		.20	.58	.88				.08	.21				4.81	
Engen Point.....	Passaic.....						.01				.25			.01		T.	.08	.22	T.	.99	1.02	.64	2.65	7.45				.79	.26	.03			14.40	
Engen Point.....	do.....																																	
Engen Point.....	Coast.....						.70				.38	.02		.18		T.	.27		.56	2.00	2.60	.75	.75	.47				.10	.15			T.	8.88	
Engen Point.....	Raritan.....						1.75	T.			.34			.35		.11	.37	T.	1.27	1.13	1.37	2.84	1.95	.74				.35	.07		.02	12.66		
Engen Point.....	Hackensack.....						.12	.09			.28			T.		T.	.27		.44	.67	1.01	.21	1.91	.75				T.	1.97	.17			T.	7.89
Engen Point.....	Coast.....						.68				.46		T.	.08		T.	.28	*	.63	1.44	2.21	.17	.45	.84			.10	.18	.19			.07	7.78	
Engen Point.....	Delaware.....						* .30				.40	.24		*		*	*	*	*	*	*	*	9.84					.20	T.					10.98
Engen Point.....	Passaic.....						.02				.25			.05		.17	.21		.77	.65	.64	.88	2.91	.02				.55		.20				7.32
Engen Point.....	Coast.....						.33				.28		T.	.04		.12	.26	T.	1.11	1.35	1.30	.25	1.15	1.46			.18	.10	.25		.65	8.82		
Engen Point.....	Raritan.....						1.11	.14			.36	.06		.24		.02	1.07	.08	.60	.66	1.99	.44	.64	.51	.18				.23				8.33	
Engen Point.....	Hackensack.....						.25				.24					.02	.42		.63	.47	.69	.37	.97	.83			1.18	.32				.07	6.46	
Engen Point.....	Hackensack.....						.07				.20	T.		.01		T.	.23	.01	.47	.84	.99	18	2.17	.71			.03	2.17	.53			.20	8.81	
Engen Point.....	Passaic.....						.01				.20			T.			.25		.40	.40	1.15	.72	1.30	1.28				T.	1.87	.38			T.	7.96
Engen Point.....	Raritan.....						.45	.01			.29	.03		.11		.03	.52	.01	.85	2.35	1.30	.77	1.07	.50			T.	.12	.02		.06	8.56		
Engen Point.....	Passaic.....															.11	.15		.84	.97	.58	2.04	6.87				.84		.08			12.78		
Engen Point.....	Raritan.....						1.34				.26	.60		.38		.60	.42	.20	1.19	.57	1.92	1.09	1.94	1.29				.53					12.33	
Engen Point.....	Rahway.....						.22				.26	T.		.06		T.	.85	T.	.65	1.13	1.69	.66	.65	.95			.05	.27	T.			T.	7.44	
Engen Point.....	Hackensack.....										.26	T.		.06		.03	.31		.51	1.10	1.15	.40	.45	.41				.85				.03	5.24	
Engen Point.....	Coast.....						.43				.45			.09		T.	.25	T.	.75	2.53	1.57	.04	.87	.63			.15	.06	.06			.05	7.93	
<i>The Southern Interior.</i>																																		
Engen Point.....	Coast.....						.40				.60	.60		.80		.38	.37	.40	1.10	.58	.70	1.70	.36	3.16					.23				11.38	
Engen Point.....	Delaware.....						.60	.15			*	.60		1.75		.21	.37		.88	.27	.57	1.62	.50	.61				T.			.10	8.23		
Engen Point.....	Delaware.....						* 2.02				.51			.93		.23	.63	.20	.67	1.06	.41	.08	.30	1.24				.02				.07	8.37	
Engen Point.....	Maurice.....										.54	.77		.94		.38	.67		.86	.43	.26	1.06	.30	2.65									9.80	
Engen Point.....	Mullica.....						.70				.49	.46		1.20		.40	.41	.17	.37	.51	.19	.19	.13	1.82				*	.68		.03	7.75		
Engen Point.....	Raritan.....						.65	*	.60		.26	.32		.78		.04	.86	.09	.62	.17	2.95	.16	.31	.52				.23	.04			.02	8.62	
Engen Point.....	Mullica.....						1.21	.51			.56	.36		1.78		.31	.54		1.02	.15	.45	.18	.25	1.68				.06				.05	9.11	
Engen Point.....	Metedeconk.....						2.00				* .55	*		*		*	*	*	1.72	.98	.04	.10	2.20				.12					T.	7.71	
Engen Point.....	Delaware.....										.42	.54		.86		.47	.39	.50	1.75	.82	.36	1.14	.56	1.04					.05			T.	10.10	
Engen Point.....	Coast.....						.38				.22	.18		1.06		.44	.14	.15	.18	.15	.10	.02	.09	1.04					.30			T.	4.45	
Engen Point.....	Coast.....						.03	.76			.21	.17		1.55		.43	.34	.06	.16	.15	.65	.02	.03	.91					.03				.01	4.91
Engen Point.....	Delaware.....						.52				.50		T.	2.16		.14	.50	.01	1.31	1.17	1.96	1.08	.46	.33			.18	T.	T.			.09	10.41	
Engen Point.....	Coast.....						.52	1.20			.37	.38		3.67		.27	.33		.21	.15	.10	.08	.07	1.01				.36					8.72	
Engen Point.....	Maurice.....						.77				.56	.48		T.		.31	.31	*	.47	.40	.18		.31	1.96					.18				6.88	
Engen Point.....	Coast.....						T.				.39	.37		1.43		.52	.25	.10	.13	.46	.50	T.	.45	.93									5.53	
Engen Point.....	Delaware.....						.85				.62		.02	1.77		.46	.65	.17	1.48	.93	1.09	1.43	.39	.31				.03				.10	10.30	
<i>The Sea Coast.</i>																																		
Engen Point.....	Coast.....						*				*	1.95				.01	.90	.05	.64	.66	.90	.05	.31	1.25				.06	.31			.20	7.29	
Engen Point.....	do.....						.36				.26			1.68		.42	.30	.04	.04	.21	T.	.01	.06	1.52				.17				.23	5.30	
Engen Point.....	do.....						.14				.44	.51		.05		.36	.71	.32	.24	.81	.04	.31	T.	1.75	T.			T.					5.68	
Engen Point.....	do.....						1.76	.03			.46		T.	.16		T.	1.07	.06	.02	.14	.69	.03	.29	3.76				.47	.07	.46		.04	9.51	
Engen Point.....	do.....						.88				.26		.01	.05		T.	1.20		.39	.34	1.22	.02	.09	.63				.07	.06	.47		.10	5.79	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded.

|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.

* Precipitation included in the next following measurement. ** Precipitation for 24-hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.			Moisture.		Sun- shine	
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	Percentage of possible sunshine
							Miles per hour.	Direction.	Date.			
Atlantic City.....	30.02	30.38	9	29.68	10	7	23	ne.	7	78	82	65
Pe May City.....	30.05	30.41	9	29.79	10	7	24	se.	21	78	82	65
ing Branch.....	30.04	30.33	9	29.75	10	7	70	nw.	26	70*	77+	67
wark.....	30.00	30.37	9	29.67	11	15	65	sw.	26	72	72	65
w York, N. Y.....	30.00	30.38	9	29.68	11	.....	.....	.....	.....	.....	.....	.....
lisades Park.....	30.00	30.39	9	29.70	10	9	27	s.	21	72	70	58
iladelphia, Pa.....	30.01	30.37	9	29.65	10	12	42	s.	26	78	80	70
ndy Hook.....	30.00	30.35	9	29.68	10	10	42	w.	10	74	71	52
enton.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Daily temperatures for July, 1919.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.	
<i>The Highlands and Kittatinny Valley</i>																																	
Belvidere.....	Maximum...	89	90	95	96	96	89	83	80	78	72	72	80	81	85	79	80	80	79	80	75	76	81	83	85	84	83	90	90	82	79	78	82.9
	Minimum...	54	57	58	52	65	69	66	56	68	61	56	49	60	63	67	62	67	69	68	70	70	68	69	65	59	65	71	64	55	56	62.6	
Charlotteburg.....	Maximum...	88	90	92	94	96	83	79	75	72	69	65	78	83	80	75	78	80	77	77	74	74	75	80	80	79	88	85	80	78	74	80.0	
	Minimum...	45	49	53	51	57	67	61	54	46	57	57	43	55	51	60	63	64	66	63	66	68	65	62	65	49	67	62	65	54	46	57.5	
Dover.....	Maximum...	88	90	93	95	96	89	80	78	75	72	70	78	80	85	71	78	77	71	79	73	75	76	80	84	82	82	88	90	80	79	78	80.7
	Minimum...	55	55	59	59	54	59	63	57	52	59	54	49	60	58	61	52	65	67	69	68	70	71	67	57	62	55	66	71	61	55	53	60.2
Layton.....	Maximum...	92	95	98	99	99	86	84	80	75	72	75	81	84	87	73	80	83	80	83	80	78	83	83	88	83	83	90	89	79	81	75	83.8
	Minimum...	51	51	53	54	59	56	62	49	51	59	55	44	56	53	60	68	58	65	70	68	69	67	55	61	53	64	72	65	54	51	58.8	
Newton.....	Maximum...	85	88	93	93	93	92	78	77	79	74	69	76	80	84	76	80	79	76	80	74	74	78	81	84	86	81	89	89	83	76	75	81.4
	Minimum...	54	62	65	65	67	68	61	54	58	54	56	50	59	59	66	57	60	54	58	67	69	69	67	59	66	57	65	69	65	56	61.0	
Phillipsburg.....	Maximum...	92	94	98	99	100	93	86	83	78	74	73	83	83	87	72	81	80	74	81	80	81	83	86	89	84	88	92	93	81	81	79	84.8
	Minimum...	56	60	59	63	67	70	66	57	57	61	57	50	61	63	63	68	63	68	69	69	70	71	68	60	65	58	65	73	65	57	56	63.1
Sussex.....	Maximum...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Minimum...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
<i>The Red Sandstone Plain.</i>																																	
Bergen Point.....	Maximum...	89	91	96	98	98	86	82	79	74	77	77	79	80	79	75	75	75	79	75	80	78	83	88	85	85	92	93	83	83	81	82.9	
	Minimum...	55	56	63	78	74	73	64	62	58	62	62	59	65	61	63	61	68	61	68	69	68	71	70	64	62	61	67	67	65	61	62	64.5
Boonton§§.....	Maximum...	91	94	96	99	97	89	84	80	76	72	71	79	85	86	73	79	81	73	82	75	79	77	84	82	84	83	90	91	80	81	77	82.9
	Minimum...	51	55	58	57	64	67	64	58	50	60	60	50	58	60	61	63	66	67	69	69	70	70	67	60	67	56	66	76	70	60	53	62.0
Elizabeth.....	Maximum...	93	92	98	100	100	89	83	82	75	76	77	80	84	84	82	78	79	77	80	76	81	78	85	89	88	86	92	95	87	83	81	84.8
	Minimum...	54	58	60	60	77	69	65	59	53	61	60	52	64	65	63	68	67	67	69	69	70	73	71	60	68	58	66	74	67	58	56	63.9
Flemington.....	Maximum...	91	98	100	101	101	93	83	81	77	74	74	79	81	86	78	78	79	74	79	77	77	86	90	84	86	93	94	82	81	78	84.8	
	Minimum...	55	62	69	64	69	70	67	60	57	61	60	53	63	65	64	69	68	68	70	70	70	72	71	62	70	60	67	73	68	60	57	65.0
Highwood.....	Maximum...	89	91	96	98	98	88	80	78	74	73	71	81	75	82	75	76	76	74	77	73	79	76	80	88	80	81	90	89	80	77	78	81.4
	Minimum...	53	56	60	58	64	70	64	58	54	63	.....	51	59	60	63	68	66	67	70	70	72	72	69	60	66	57	67	73	66	55	56	62.9
Jersey City.....	Maximum...	94	93	101	102	102	91	87	84	77	76	75	81	84	79	75	76	77	74	80	74	80	76	84	91	89	86	93	94	84	85	82	84.7
	Minimum...	59	68	68	70	74	71	66	63	62	64	61	59	65	65	65	68	69	67	70	70	71	72	70	66	66	70	76	72	62	64	67.1	
Lambertville.....	Maximum...	87	89	94	96	96	90	80	78	74	72	72	72	76	80	75	76	76	74	77	76	75	81	84	80	82	89	90	79	78	77	80.6	
	Minimum...	58	58	58	58	70	70	68	58	55	61	59	51	62	65	63	68	66	68	70	69	70	68	70	61	59	60	66	73	68	57	58	63.4
Little Falls.....	Maximum...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	Minimum...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newark.....	Maximum...	90	92	95	101	100	88	84	79	71	72	70	79	81	80	72	75	75	71	81	72	78	75	82	88	84	85	91	91	75	75	73	81.5
	Minimum...	62	69	65	71	77	70	65	64	59	62	61	58	62	65	64	68	68	67	69	69	70	72	68	69	71	68	70	73	62	57	54	66.1
New Brunswick.....	Maximum...	90	92	95	98	98	98	80	79	77	74	72	78	77	82	75	77	77	74	79	76	80	79	83	87	87	84	90	89	79	78	80	82.7
	Minimum...	54	63	63	68	71	70	66	61	54	61	60	54	64	62	63	68	69	67	68	69	71	72	70	63	69	60	68	74	67	55	58	64.6
Palisades Park.....	Maximum...	91	93	96	100	99	90	84	79	75	75	72	81	82	84	77	79	79	74	80	75	81	77	83	89	83	84	92	92	80	82	81	83.5
	Minimum...	53	58	60	60	65	62	58	54	62	54	62	52	60	60	62	68	66	67	70	70	72	73	68	59	62	57	66	69	60	55	58	62.2
Paterson.....	Maximum...	93	94	100	102	101	95	88	84	77	75	74	85	86	85	76	78	77	83	74	81	77	83	89	86	85	92	93	83	82	82	82	85.1
	Minimum...	57	68	68	68	77	69	65	62	57	62	60	56	62	63	64	68	69	69	70	70	72	72	69	.....	69	61	68	74	.....	61	60	6.59 ^b
Plainfield.....	Maximum...	88	88	94	96	97	86	81	79	76	74	74	80	80	83	74	76	75	73	76	74	79	77	82	86	84	84	90	89	79	79	81.8	
	Minimum...	54	59	60	61	66	69	65	59	53	60	58	50	61	61	63	68	66	67	69	69	71	72	70	60	68	55	73	69	60	56	63.2	
Somerville.....	Maximum...	86	95	98	99	99	91	84	80	76	74	74	80	81	88	77	79	78	75	80	76	79	79	85	89	85	86	92	94	86	86	85	84.5
	Minimum...	50	51	52	62	65	68	65	59	50	59	58	48	61	60	61	67	66	66	69	68	70	71	69	60	68	57	67	70	68	55	58	61.8
South Orange.....	Maximum...	91	90	94	97	97	87	82	78	76	75	71	80	81	82	76	78	77	73	80	74	81	76	82	87	83	85	90	90	80	80	82.4	
	Minimum...	65	61	67	71	73	71	65	62	55	61	57	55	62	62	64	68	69	70	71	72	72	69	62	66	59	71	68	66	61	59	65.1	
New York, N. Y.....	Maximum...																																

U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU

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CLIMATOLOGICAL DATA

NEW JERSEY SECTION

AUGUST, 1919.

BY

G. HAROLD NOYES

METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
SEPTEMBER 19, 1919.

Departure of the Mean Temperature from the Normal, August, 1919.



Shaded portions show excess (+).
Unshaded portions show deficiency (-).
Lines show amount of excess or deficiency.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

VOL. XXIV. TRENTON, N. J., AUGUST, 1919. No. 8.

GENERAL SUMMARY.

August was cool and wet, all stations reporting a deficiency in the temperature element, while precipitation in excess of the normal occurred at every station except Trenton and four stations in the extreme northern counties. Temperatures were normal or slightly above from the 20th to 25th only, the remainder of the month showing a deficiency. The excess of precipitation was most pronounced along the southeastern coast, where by far the greatest volume of the month's fall occurred on the 13th-14th and was attendant upon a cyclonic disturbance of marked severity that moved northeastward along the New Jersey coast. The rain amounted to over eight inches in the 24 consecutive hours during this storm, and was one of the heaviest falls of rain ever noted in such a short period in New Jersey. At Atlantic City four and three quarters inches fell in a little less than four hours. The gale, driving the rain, wrought considerable havoc along the coast to shrubbery and other frail vegetation, and much damage was caused to insecure objects. At the State Military Encampment at Sea Girt nearly all of the tentage was destroyed or seriously damaged. The principal days of rain were the 5th to 7th, 13th to 21st, 25th, 30th and 31st. The first week was generally favorable for crop development. Prevailing cloudiness and, in some districts, the excess of rain, together with the deficient warmth of the middle fortnight, were detrimental to practically all crops except grass during that period. The closing week, with nearly normal warmth, adequate sunshine, and not too much rain aided crops in making some recovery, but they generally showed permanent injury from earlier excessive rains.

The mean stage of the Delaware River at Phillipsburg was 2.8 feet. At Trenton the mean stage was 2.0 feet, which was 1.0 foot above the normal. The highest stage, 3.1 feet, occurred on the 9th.

The temperature departure from the normal for the year 1919 to date, by sections, is: The Highlands, $+1.4^{\circ}$; Red Sandstone Plain, $+1.5^{\circ}$; Southern Interior, $+1.6^{\circ}$; Sea Coast, $+1.6^{\circ}$. The precipitation accumulated departure from the normal, for the year 1919 to date, by sections, is: The Highlands, $+5.39$; Red Sandstone Plain, $+5.94$; Southern Interior, $+7.65$; Sea Coast, $+10.11$.

Storm warnings were displayed on the coast on the 13th and 14th. S. S. S.

TEMPERATURE.

The mean monthly temperature of the State as deduced from observations of 38 stations was 69.9° , which was 2.0° below the normal. The highest temperature was 98° at Clayton on the 24th, and the lowest, 38° at Charlotteburg on the 30th. The highest monthly mean was 73.4° at Cape May City, and the lowest, 63.6° at Charlotteburg. The greatest daily range of temperature was 41° at Clayton on the 24th. The warmest portion of the State comprised the extreme south and southwestern counties.

PRECIPITATION.

The mean total rainfall of the State, as deduced from observations of 45 stations was 6.89 inches, which was 2.23 inches above the normal. The greatest monthly rainfall was 12.88 inches at Woodbine, and the least, 3.09 inches at Layton. The greatest amount of rain in any 24 consecutive hours was 9.40 inches at Tuckerton on the 13-14th; all stations, excepting two, reporting over an inch in 24 hours. The average number of

days on which 0.01 inch or more of rain fell was 13, or 3 more than normal.

WIND.

The prevailing wind direction was from the northwest, with an approximate velocity of 9 miles an hour, which was about normal. The highest velocity, sustained for 5 consecutive minutes, was 76 miles an hour from the northeast on the 13th, at Long Branch.

SUNSHINE AND CLOUDINESS.

The average number of clear days throughout the State was 12, or 1 less than normal; partly cloudy 11, normal; and cloudy 8, or 1 more than normal. The percentage of possible sunshine was 63, or about the normal amount.

MISCELLANEOUS.

The mean atmospheric pressure, reduced to sea-level, was 29.95 inches, which was 0.05 inch below the normal. Highest reading, 30.31 inches at Cape May City on the 11th; lowest, 29.60 inches at Atlantic City on the 14th.

Thunderstorms occurred in some portions of the State on the 6th, 8th, 12th, 15th, 16th, 18th, 19th, 21st to 25th, 27th, 28th, and 30th. Dense fog occurred on the 6th, 7th, 11th, 12th, 16th to 19th, 30th, and 31st. Haze was noted on the 4th, 6th, and from the 10th to 13th; smoke on the 11th, 12th, and 30th. Solar halos were observed on the 4th, 12th, and 30th. Light frost formed at Culvers Lake on the 27th. Light hail fell at Indian Mills on the 15th, at Atlantic City and Clayton on the 18th; while heavy hail occurred at Branchville on the 25th.

ERRATA.

Comparative data for June, 1919.—Page 43. Least monthly precipitation for 1919 should read 0.37 inch instead of 1.15 inches. Jersey City: page 44, mean temperature should read 72.1° , and the departure, $+1.9^{\circ}$; page 46, mean minimum temperature should read 61.9° .

Little Falls: omit maximum temperatures on page 46, and highest temperature and greatest daily range on page 44.

COMPARATIVE DATA FOR AUGUST.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more prec.
1885.....	71.7	95	40	6.11	10.09	3.47	.....	.....	.....	.....
1886.....	69.5	96	42	2.81	5.36	1.10	.....	.....	.....	8
1887.....	70.4	94	42	3.76	7.34	2.09	.....	.....	.....	8
1888.....	72.5	98	41	6.13	10.53	2.55	.....	.....	.....	9
1889.....	69.6	91	45	5.13	9.06	1.93	.....	.....	.....	10
1890.....	71.5	99	40	4.90	7.51	2.89	8	15	8	11
1891.....	72.8	100	46	5.32	8.89	2.58	8	11	12	13
1892.....	73.4	99	46	3.63	5.65	0.72	12	13	6	9
1893.....	72.8	98	38	6.52	11.94	3.55	14	11	6	8
1894.....	70.9	97	44	2.58	9.28	0.15	13	12	6	7
1895.....	74.2	102	34	2.53	5.06	0.02	16	12	3	7
1896.....	73.6	105	39	1.83	3.27	0.50	17	10	4	7
1897.....	71.0	91	41	4.39	8.69	2.07	14	12	5	9
1898.....	74.8	98	42	5.36	9.28	2.70	12	12	7	10
1899.....	72.3	99	39	4.36	9.70	2.16	10	12	9	9
1900.....	76.3	104	41	2.68	4.56	0.70	15	11	5	10
1901.....	73.8	98	44	9.43	15.80	4.88	12	10	9	11
1902.....	70.1	93	40	3.91	10.67	1.31	15	13	3	9
1903.....	68.4	98	39	6.95	14.54	4.30	10	10	11	13
1904.....	70.8	92	37	6.62	13.01	2.65	15	10	6	9
1905.....	71.1	95	38	5.72	9.88	3.51	13	10	8	12
1906.....	74.6	97	42	5.95	17.91	2.21	10	11	10	13
1907.....	70.5	96	39	3.45	7.61	1.79	14	12	5	10
1908.....	70.6	103	36	5.06	9.23	2.43	11	10	10	10
1909.....	70.2	100	34	4.59	12.94	1.41	14	9	8	6
1910.....	70.4	92	36	3.78	8.46	1.76	9	10	12	10
1911.....	72.1	101	39	8.91	14.74	5.31	10	11	10	11
1912.....	70.0	95	35	3.42	7.62	1.19	12	13	6	10
1913.....	71.7	100	38	4.06	10.21	1.93	18	9	4	10
1914.....	73.3	98	42	3.15	6.53	1.04	13	12	6	9
1915.....	70.9	98	41	7.73	10.92	4.02	11	7	9	13
1916.....	73.2	100	40	1.34	4.15	0.27	20	7	4	6
1917.....	74.0	103	41	2.21	5.68	0.86	18	9	4	7
1918.....	74.4	108	40	1.85	4.25	0.34	18	7	6	7
1919.....	70.0	98	38	6.89	12.88	3.09	13	10	8	13

* Climatological data for August, 1919.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation .01 in. or more.	Clear.	Pt. cloudy.			Cloudy.
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	28	67.8	-3.0	89	24	44	29	35	6.75	+1.79	1.76	0	13	20	2	9		Samuel J. Hixson. George S. Briggs. Brice E. Riker. William C. Harris.
Charlotteburg.....	Passaic.....	719	27	63.6	-4.1	85	24	38	30	37	5.86	+1.11	1.87	0	11	19	6	6	w.	
Culvers Lake††.....	Sussex.....	848	18	66.2	-3.0	88	24	39	28	31	5.09	+0.56	1.58	0	16	18	4	9	se.	
Dover.....	Morris.....	600	35	66.2 ^a	-3.0	88	24	46	28	31	6.08	+1.08	1.83	0	16	0	23	8	.....	
Layton.....	Sussex.....	480	19	66.5	-1.9	90	24	43	29	37	3.09	-0.55	1.21	0	14	20	2	9	w.	A. M. Depue. Irving G. Kern. D. Wilson Smith. Rev. W. August George.
Newton.....	Sussex.....	769	38	66.8	-3.0	85	23	49	27	27	5.83	+1.42	2.17	0	12	13	7	11	sw.	
Phillipsburg.....	Warren.....	363	37	69.0	-2.7	90	24	49	29	32	6.41	+1.71	2.36	0	14	19	6	6	nw.	
Sussex.....	Sussex.....	442	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Means and extremes.....				66.6	-3.0	90	24	38	30	37	5.59	+1.02	2.36	0	14	16	7	8	w.	
<i>The Red Sandstone Plain.</i>																				
Bergen Point††.....	Hudson.....	37	22	69.8	-1.9	91	24	51	27	33	7.55	+2.49	2.15	0	12	7	18	6	sw.	William H. Mitchell. J. W. Demmers. George Shields. L. B. Bonnett.
Boonton.....	Morris.....	400	29	67.8	.....	89	24	46	28	33	5.28	-0.11	1.08	0	16	22	3	6	nw.	
Chatham.....	Morris.....	330	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Elizabeth.....	Union.....	45	40	69.6	-3.9	92	24	49	10	32	6.68	+2.14	1.71	0	11	10	13	8	nw.	
Flemington.....	Hunterdon.....	140	31	70.9	-0.9	91	24	50	29	31	6.06	+1.65	2.36	0	12	18	6	7	w.	Hiram E. Deats. Charles J. Bates. S. K. Pearson, Jr. Thomas R. Hunt.
Highwood.....	Bergen.....	90	30	67.7	-3.5	89	24	48	10	30	5.63	+0.56	1.58	0	13	6	15	10	nw.	
Jersey City.....	Hudson.....	10	20	72.0	-1.3	92	24	58	8	25	7.12	+2.47	2.32	0	12	11	11	9	nw.	
Lambertville.....	Hunterdon.....	80	32	68.8 ^a	-3.6	87	24	49	29	31 ^a	7.07	+2.31	3.09	0	12	10	13	8	w.	
Little Falls.....	Passaic.....	180	16					51	9		4.74	-0.37	1.35	0	11	11	9	11	w.	Montclair Water Co. Prof. William Wiener. N. J. Experiment Station. Hackensack Water Co.
Newark.....	Essex.....	159	77	70.1	-2.5	90	24	56	14	25	6.82	+1.58	1.90	0	12	18	7	6	w.	
New Brunswick.....	Middlesex.....	110	66	70.3	-2.1	89	24	52	9	27	6.30	+1.21	2.14	0	15	12	13	6	w.	
New Milford.....	Bergen.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4.40	.....	1.18	0	14	.....	.....	.....	.....	
Palisades Park.....	Bergen.....	80	4	68.0		90	24	48	10	32	6.15		1.75	0	15	9	14	8	nw.	George P. Kirsten. Marion T. Probert. John C. Sutphen. M. S. Taylor
Paterson.....	Passaic.....	80	48	71.2	-0.8	92	24	52	28	27	4.05	-1.08	1.64	0	12	5	4	22	sw.	
Plainfield.....	Union.....	100	32	68.6	-3.5	89	24	49	28	27	5.13	+0.26	1.56	0	14	11	14	6	nw.	
Pompton Plains.....	Morris.....	195	17	.....	.....	.....	.....	.....	.....	.....	5.47	+0.39	0.89	0	13	.....	.....	.....	.....	
Somerville.....	Somerset.....	60	37	69.9	-2.0	95	7	48	10	34	5.74	+1.03	1.61	0	12	13	10	8	nw.	A. A. Macdonald. Dr. W. J. Chandler. Hackensack Water Co. U. S. Weather Bureau.
South Orange.....	Essex.....	200	49	68.6	-2.1	88	24	52	9	25	7.44	+2.05	1.67	0	13	12	12	7	w.	
Woodcliff Lake.....	Bergen.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.74	.....	1.00	0	9	.....	.....	.....	.....	
New York, N. Y.....	.....	365	49	70.2	-2.0	89	24	56	14	23	7.74	+3.21	2.39	0	11	7	13	11	nw.	
Means and extremes.....				69.5	-2.3	95	7	46	28	34	5.85	+1.15	3.09	0	13	12	11	8	nw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	38	72.6	-2.5	93	24	50	9	27	8.30	+3.56	5.05	0	13	18	6	7	sw.	Henry A. Jorden. D. S. B. McCoy. U. S. Army. Melvin F. Wills.
Burlington.....	Burlington.....	12	33	72.1	-1.3	94	24	52	29	31	6.34	+0.73	2.30	0	13	23	2	6	nw.	
Camp Dix.....	Burlington.....	.....	1	70.6	.....	91	24	50	10	30	5.57	.....	2.22	0	12	8	6	17	sw.	
Clayton.....	Gloucester.....	126	27	71.3	-2.2	98	24	52	10	41	.....	.....	.....	0	12	10	14	7	nw.	
Hammonton.....	Atlantic.....	103	17								5.82	+1.14	2.32	0	13	18	9	4	nw.	G. H. Parkhurst. Rev. W. A. Stanton. Wm. R. Heudrickson. James M. Armstrong.
Hightstown.....	Mercer.....	120	26	70.7	-1.2	91	24	51	9	28	5.26	+0.49	2.47	0	14	13	12	6	nw.	
Imlaytown.....	Monmouth.....	185	30	70.5 ^b	-2.6	91	21	47	29	38	5.79	+0.93	2.73	0	15	14	12	5	w.	
Indian Mills.....	Burlington.....	76	30	70.5	-2.6	93	24	48	10	36	7.84	+2.67	3.00	0	12	10	13	8	nw.	
Lakewood.....	Ocean.....	54	16	70.0	-0.7	90	24	48	29	31	9.70	+4.63	5.67	0	13	13	9	9	w.	R. W. Holman. Geo. L. Gillingham. William L. Flick. Lincoln Van Gilder.
Moorestown.....	Burlington.....	75	57	70.8	-1.7	89	24	52	9	26	5.94	+1.20	2.81	0	11	17	9	5	w.	
Northfield.....	Atlantic.....	25	12	.....	.....	.....	.....	.....	.....	.....	12.32	+7.57	4.80	0	15	.....	.....	.....	.....	
Pleasantville.....	Atlantic.....	26	21	.....	.....	.....	.....	.....	.....	.....	8.21	+3.52	2.63	0	14	18	3	10	.....	
Trenton.....	Mercer.....	190	48	70.6	-2.4	90	24	55	28	26	4.82	-0.55	2.51	0	11	6	16	9	w.	U. S. Weather Bureau. Frank R. Austin. H. C. Himes. Jos. H. Cohen. U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	26	71.3	-0.9	94	24	50	3	32	12.46	+6.68	9.40	0	14	14	11	6	sw.	
Vineland.....	Cumberland.....	109	51	72.8 ^b	-0.8	92	24	54	26	28 ^c	7.59	+2.62	4.61	0	10	.....	.....	.....	.....	
Woodbine.....	Cape May.....	43	28	70.1	-2.1	90	24	47	27	31	12.88	+8.58	4.40	0	13	6	13	12	s.	
Philadelphia, Pa.....		117	49	73.3	-0.5	92	24	59	14	24	6.19	+1.58	3.92	0	10	9	14	8	nw.	
Means and extremes.....				71.1	-1.8	98	24	47	27	41	7.92	+3.13	9.40	0	13	13	10	8	nw.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	30	71.3	-0.6	92 ^a	24	56	26	24	7.37	+2.23	2.90	0	13	18	7	6	w.	Miss Dorothy A. Alexander. U. S. Weather Bureau. U. S. Weather Bureau. William D. Martin, Jr. U. S. Weather Bureau.
Atlantic City.....	Atlantic.....	16	46	72.0	-0.6	91	24	58	26	26	11.57	+7.27	8.64	0	15	11	11	9	sw.	
Cape May City.....	Cape May.....	17	35	73.4	0.0	92	24	59	9	23	12.60	+8.34	8.17	0	14	14	8	9	sw.	
Long Branch.....	Monmouth.....	25	12	69.8	-1.6	92	24	55	10	23	9.64	+4.54	4.29	0	12	13	11	7	s.	
Sandy Hook.....	Monmouth.....	22	21	71.1	-1.6	89	24	59	29	20	5.76	+0.91	1.78	0	11	9	14	8	sw.	
Means and extremes.....				71.5	-0.9	92	24	55	10	26	9.39	+4.66	8.64	0	13	13	10	8	sw.	
For the State.....				69.9	-2.0	98	24	38	30	41	6.89	+2.23	9.40	0	13	13	10	8	w.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

†† Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Pleasantville is Atlantic City; Milford and Woodcliff Lake are Hackensack.

Daily temperatures for August, 1919.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.	
<i>The Highlands and Kittatinny Valley</i>																																	
Belvidere.....	Maximum...	80	76	79	80	72	75	84	85	76	76	79	80	71	70	80	80	72	67	78	83	85	85	85	89	80	74	70	74	79	79	80	78.2
	Minimum....	66	56	50	56	52	68	68	68	50	50	52	57	61	55	54	60	61	61	63	68	60	65	56	58	56	50	55	48	44	58	53	57.4
Charlotteburg.....	Maximum...	77	77	72	79	73	69	83	74	74	75	80	76	69	65	78	77	69	63	71	78	82	80	82	85	73	73	66	70	77	72	74	74.6
	Minimum....	64	46	54	48	55	66	66	68	45	40	44	47	59	53	49	52	46	59	50	58	52	63	50	58	60	44	50	41	40	38	61	52.5
Dover.....	Maximum...	81	74	78	81	75	70	84	84	77	75	79	79	68	66	78	78	66	63	76	82	85	83	84	88	75	72	70	75	78	74	....	76.6 ^a
	Minimum....	62	55	50	53	60	69	68	56	49	47	51	53	56	54	53	58	61	61	60	58	58	60	56	62	55	48	52	46	47	53	....	55.7 ^a
Layton.....	Maximum...	80	78	78	80	70	74	88	78	76	78	82	80	71	71	80	83	71	67	79	83	85	85	86	90	76	72	70	74	80	76	83	78.2
	Minimum....	64	53	44	52	57	68	67	60	44	44	47	52	59	54	63	59	63	58	60	56	54	62	55	56	56	44	52	45	43	49	59	54.8
Newton.....	Maximum...	78	74	75	79	75	72	84	82	73	73	76	79	70	66	78	79	74	66	75	79	80	83	85	80	79	68	68	68	76	72	78	75.6
	Minimum....	63	55	51	58	62	68	68	67	50	50	54	56	60	55	54	68	54	56	62	58	62	61	59	60	61	50	49	56	49	56	63	57.9
Phillipsburg.....	Maximum...	82	76	78	82	73	79	88	83	80	79	83	84	71	72	82	85	69	88	80	84	88	85	87	90	78	74	72	73	81	74	82	79.4
	Minimum....	63	56	52	57	65	69	68	59	51	51	54	58	57	56	55	61	65	62	62	59	60	66	59	63	61	51	54	50	49	58	64	58.5
Sussex.....	Maximum...																																
	Minimum....																																
<i>The Red Sandstone Plain.</i>																																	
Bergen Point.....	Maximum...	83	77	80	83	87	77	87	87	77	78	77	80	73	68	77	78	71	67	77	84	88	85	87	91	78	74	74	82	80	84	79.6	
	Minimum....	61	61	54	54	66	68	68	57	54	67	67	55	58	57	59	65	61	62	59	64	68	61	67	61	54	51	53	52	62	60	60.0	
Boonton§§.....	Maximum...	82	76	79	80	80	71	85	83	79	78	83	80	71	69	79	83	69	65	78	84	85	84	86	89	77	73	72	73	78	75	80	78.3
	Minimum....	65	59	59	54	60	66	68	69	49	48	50	53	60	56	52	58	63	61	60	59	57	64	55	62	63	51	53	46	46	52	60	57.4
Elizabeth.....	Maximum...	86	78	82	83	76	78	88	89	81	78	83	82	73	70	79	81	71	67	82	85	89	87	89	92	81	77	73	76	82	79	83	80.6
	Minimum....	67	57	51	56	64	70	68	69	51	49	53	57	55	57	54	63	61	61	62	59	61	67	58	65	62	50	53	49	49	50	56	58.7
Flemington.....	Maximum...	82	81	78	81	78	80	89	85	83	81	85	81	77	70	83	80	76	68	82	85	87	89	90	91	89	75	76	74	81	78	85	81.3
	Minimum....	68	59	56	60	65	70	70	63	55	52	57	60	63	57	55	60	66	64	64	61	64	67	61	66	65	52	55	51	50	56	65	60.5
Highwood.....	Maximum...	80	78	78	80	74	73	83	82	78	77	80	79	72	66	76	78	69	66	75	80	84	84	84	89	76	72	70	71	78	76	80	77.0
	Minimum....	66	56	51	57	61	68	68	66	50	48	52	54	63	56	54	62	64	63	62	57	59	67	56	63	63	50	54	49	48	56	66	58.4
Jersey City.....	Maximum...	85	81	83	81	78	76	87	88	81	81	83	84	75	69	79	81	70	67	80	84	87	87	92	83	75	74	75	81	80	82	80.5	
	Minimum....	64	61	58	64	68	70	69	74	58	58	61	63	69	58	60	65	64	61	62	64	67	69	70	70	60	59	58	59	58	64	66	63.6
Lambertville.....	Maximum...	80	73	76	79	74	78	84	83	83	76	79	79	74	70	76	76	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	77.8 ^a
	Minimum....	67	58	52	60	66	70	69	65	52	52	57	62	61	56	57	60	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	59.8 ^a
Little Falls.....	Maximum...																																
	Minimum....	61	54	57	64	69	69	70	54	51	55	57	63	57	56	61	65	63	62	61	61	67	60	64	65	53	56	51	51	56	64	63	60.0
Newark.....	Maximum...	81	76	78	82	75	73	88	84	80	78	82	80	71	66	75	78	69	65	79	82	86	84	86	90	75	72	71	72	81	77	82	78.0
	Minimum....	60	61	59	64	66	69	68	62	57	57	61	62	59	56	59	64	65	62	61	63	65	70	64	71	63	57	58	56	61	67	62.2	
New Brunswick.....	Maximum...	83	80	77	81	76	79	86	86	77	78	83	82	78	67	80	78	76	68	79	82	87	84	86	89	87	73	72	73	79	77	80	79.5
	Minimum....	67	60	54	60	63	70	69	73	52	53	58	59	65	57	55	62	66	64	63	61	65	68	63	67	64	53	54	52	52	60	66	61.1
Palisades Park.....	Maximum...	82	77	79	82	75	74	86	86	79	78	82	81	72	65	77	80	70	66	74	84	87	85	86	90	76	74	74	74	80	77	83	78.5
	Minimum....	61	56	51	57	62	69	68	56	49	48	53	55	58	57	54	63	63	62	57	60	63	57	63	54	49	53	49	48	57	63	57.4	
Paterson.....	Maximum...	84	80	80	83	77	74	83	87	80	79	83	80	75	69	79	82	73	69	80	85	88	88	92	89	76	73	75	82	77	84	80.5	
	Minimum....	69	60	60	64	65	69	69	72	54	53	62	58	65	57	61	64	64	62	65	62	73	68	66	62	53	56	52	54	58	67	62.0	
Plainfield.....	Maximum...	82	75	77	79	76	77	85	85	77	76	80	80	72	68	78	78	71	66	78	83	85	84	85	89	81	72	69	76	77	81	77.9	
	Minimum....	66	58	53	56	63	70	69	70	54	50	54	57	60	56	54	61	65	63	62	58	61	66	58	64	62	50	49	...	...	...	55.6	
Somerville.....	Maximum...	91	80	84	88	77	84	95	85	80	79	85	85	76	68	85	81	75	68	83	84	87	85	87	91	84	75	72	75	82	78	83	81.4
	Minimum....	68	58	55	58	65	70	72	50	48	53	55	62	55	51	57	65	62	62	55	59	60	62	48	50	50	48	48	55	64	58.4		
South Orange.....	Maximum...	82	76	78	80	75	73	86	84	73	76	79	75	72	67	76	78	70	66	78	81	85	82	83	88	77	71	70	72	77	80	77.1	
	Minimum....	67	60	58	60	65	69	69	64	52	57	57	58	59	57	55	63	65	63	62	61	63	66	62	66	57	54	54	52	52	57	57	60.0
New York, N. Y.....	Maximum...	80	75	78	79	74	76	84	85	76	76	80	78	71	66	74	78	68	65	78	81												



Scale of Shading.

0 to 1 inch.

1 to 2 inches

2 to 4 inches

4 to 6 inches

6 to 8 inches

Over 8 inches

Based on 850 records.

Scale Miles
0 100 200 300 400 500
Kilometers
0 100 200 300 400 500

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CLIMATOLOGICAL DATA

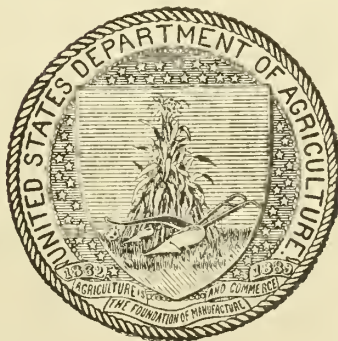
NEW JERSEY SECTION

SEPTEMBER, 1919.

BY

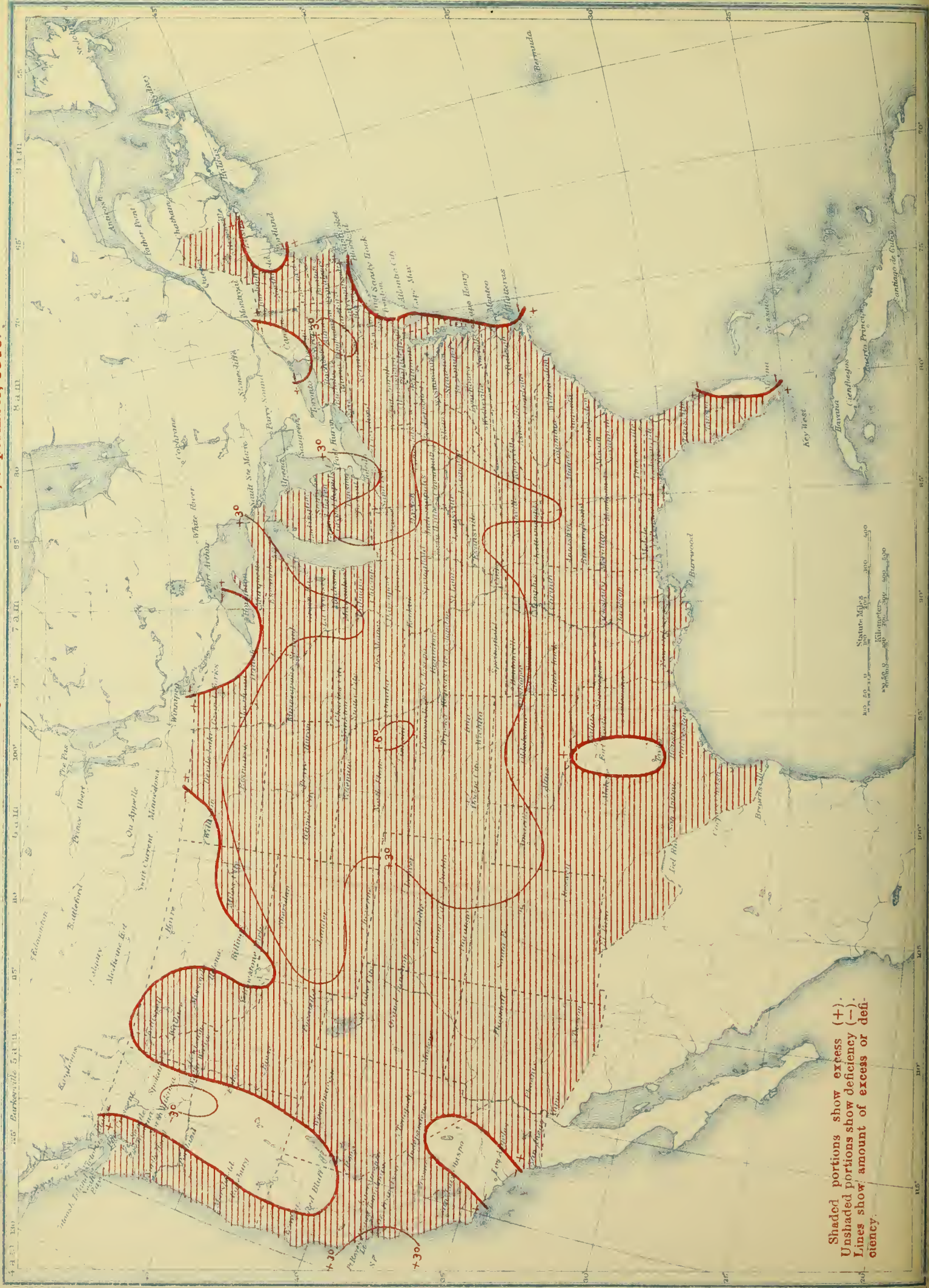
G. HAROLD NOYES

METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
OCTOBER 23, 1919.

Departure of the Mean Temperature from the Normal, September, 1919.



Shaded portions show excess (+).
Unshaded portions show deficiency (-).
Lines show amount of excess or deficiency.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

OL. XXIV. TRENTON, N. J., SEPTEMBER, 1919. No. 9.

GENERAL SUMMARY.

Taking the State as a whole, September was nearly a normal month, the only departure from the normal being a precipitation deficiency of almost an inch. The temperatures were generally below normal in northern, central, and coast sections, but a sufficient excess prevailed in the southern sections to bring the State mean to normal. Readings of 90° or higher occurred at most stations on the 7th and 8th, and other warm days were on the 20th to 23d, and the 30th. The minima occurred at various dates, in northern sections mostly on the 27th, and in other sections on the 18th, 19th, and also on the 27th; the readings ranging from 30° at Culvers Lake to 53° at Sandy Hook. Precipitation was greatest in the northeastern counties, being generally in excess of normal there, while the deficiencies in the remainder of the State were from one to three inches. Atlantic and Cape May counties were the driest portion of the State. The principal rainy days were the 1st to 3d, 10th to 12th, 22d and 23d.

The opening week was cool and cloudy, with showers, in the first half, but the warmth and dryness of the latter part were favorable for crop growth and farm work. It was followed by a return to cool and overcast conditions with rain on several days of the second week, and the lack of sunshine and warmth was apparent in the slow progress of crops. However, a quick recovery and advance were made during the third week, owing to the dry warmth and sunshine that prevailed; and, excepting for the heavy rains that fell on the 22d-23d, which caused the washing of newly sown ground, this progress was continued to the close of the month.

The temperature departure from the normal for the year 1919 to date, by sections, is: The Highlands, +1.2°; Red Sandstone Plain, +1.4°; Southern Interior, +1.4°; Sea Coast, +1.4°. The precipitation accumulated departure from the normal, for the year 1919 to date, by sections, is: The Highlands, +4.47; Red Sandstone Plain, +6.26; Southern Interior, +5.86; Sea Coasts, +9.07.

Storm warnings were displayed on the coast on the 12th and 9th. S. S. S.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 39 stations, was 65.8°, which was normal. The highest temperature was 96° at Imlaystown and Tuckerton on the 8th, and the lowest, 30° at Culvers Lake on the 27th. The highest monthly mean temperature was 68.5° at Bridgeton, and the lowest, 61.2° at Charlotteburg. The greatest daily range of temperature was 43° at Somerville on the 7th. The warmest portion of the State comprised Cumberland and the extreme southern portion of Cape May counties.

PRECIPITATION.

The mean total rainfall of the State, as deduced from observations of 46 stations, was 3.26 inches, which was 0.80 inch below the normal. The greatest monthly rainfall was 6.28 inches at Pompton Plains, and the least, 1.04 inches at Woodbine. The greatest amount of rain in any 24 consecutive hours was 3.11 inches at Pompton Plains on the 22d-23d. The mean of the number of days on which 0.01 inch or more of rain fell was 8, or normal.

WIND.

The prevailing wind direction was from the southwest, with an approximate velocity of 10 miles an hour, which was about normal. The highest velocity, sustained for 5 consecutive

minutes, was 50 miles per hour from the northwest on the 12th, at Long Branch.

SUNSHINE AND CLOUDINESS.

The average number of clear days throughout the State was 16, which was 2 more than normal; partly cloudy, 6, or 3 below normal; and cloudy, 8, or 1 more than normal. The approximate percent of possible sunshine was 63, which was probably slightly below normal.

MISCELLANEOUS.

The mean atmospheric pressure, reduced to sea level, was 30.04 inches, which was 0.03 inch below the normal. The highest reading was 30.44 inches at Cape May City on the 28th, and the lowest, 29.56 inches at Trenton and Sandy Hook on the 11th.

The mean stage of the Delaware River at Phillipsburg was 1.7 feet. At Trenton the mean stage was 1.2 feet, which was 0.1 foot above the normal. The highest stage, 2.4 feet, occurred on the 23d.

Thunderstorms occurred in some portions of the State on the 1st, 3d, 9th, 10th, 11th, 12th, 21st, 22d, and 23d. Dense fog occurred on the 7th, 10th, 11th, 16th, 20th, 21st, 24th, 25th, 26th, 28th, 29th, and 30th. Smoke was noted on the 15th. Frost, with no appreciable damage, formed on the 5th, 6th, 18th, 19th, 24th, 27th, and 28th. Lunar halos were observed on the 5th, 7th, and 9th; and solar halos on the 19th and 30th. The aurora was noted on the 18th.

ERRATA.

July 1919, page 52: Newark mean temperature should read 74.8°; departure from normal, +0.5; and lowest temperature, 58° on the 12th.

Page 54: Newark, maximum temperature on the 29th should read 85°; 30th, 85°, and 31st, 83°; minimum temperature on the 29th should read, 72°; 30th, 67°, and 31st, 64°. Mean maximum temperature should read 82.4°, and mean minimum temperature, 67.1°.

August, 1919, page 62: The data attributed to Indian Mills applies to Imlaystown, and that of Imlaystown applies to Indian Mills.

COMPARATIVE DATA FOR SEPTEMBER.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more prec.
1885.....	64.2	93	38	0.83	1.69	0.25	.....	.....	.....	.....
1886.....	66.9	95	36	1.13	1.76	0.86	.....	.....	.....	.....
1887.....	61.6	90	30	3.66	6.25	1.62	.....	.....	.....	.....
1888.....	63.1	84	29	7.09	10.65	3.75	.....	.....	14	12
1889.....	64.8	90	34	8.36	13.13	3.17	.....	.....	14	14
1890.....	64.4	91	33	4.75	8.61	2.59	10	10	10	10
1891.....	68.7	95	39	2.46	5.91	0.90	16	9	5	6
1892.....	64.2	90	33	1.81	3.78	1.02	15	11	4	6
1893.....	62.7	90	31	3.20	5.38	1.93	12	10	8	8
1894.....	68.8	97	31	7.46	11.65	3.69	10	10	10	8
1895.....	69.7	109	29	1.07	2.71	0.22	17	10	3	5
1896.....	65.1	95	30	4.37	8.74	2.26	19	7	4	5
1897.....	65.5	99	30	1.65	3.97	0.21	19	8	5	6
1898.....	68.6	100	31	2.00	3.87	0.65	17	9	6	9
1899.....	64.4	93	30	5.88	9.61	2.88	15	9	6	9
1900.....	69.9	98	32	2.86	7.37	1.09	14	10	6	6
1901.....	66.8	94	29	3.38	6.82	1.63	15	9	6	6
1902.....	64.6	93	30	5.65	8.95	3.11	11	7	12	13
1903.....	65.0	92	29	3.34	7.10	1.32	17	8	5	7
1904.....	64.8	93	23	4.79	10.08	0.89	14	10	4	7
1905.....	65.4	90	28	5.23	9.18	2.87	16	7	7	8
1906.....	68.9	94	33	2.19	4.66	0.75	15	9	6	7
1907.....	67.1	92	31	8.08	12.95	3.55	10	8	12	14
1908.....	65.7	90	29	2.09	4.13	0.95	11	10	9	3
1909.....	64.5	89	30	3.30	4.58	2.08	11	10	9	8
1910.....	67.3	97	32	2.39	3.97	1.01	12	10	8	6
1911.....	66.4	90	30	2.88	5.33	1.08	10	12	8	9
1912.....	65.9	87	24	4.47	6.76	2.68	12	7	11	10
1913.....	64.4	96	27	3.87	6.55	1.56	13	8	9	9
1914.....	64.0	99	24	0.37	1.64	0.44	21	6	3	3
1915.....	68.5	97	30	2.08	4.46	0.55	17	9	4	5
1916.....	65.2	98	31	2.84	5.29	1.29	20	7	3	6
1917.....	61.5	87	25	2.74	6.13	0.47	16	7	4	6
1918.....	62.2	90	29	3.84	6.00	2.66	14	8	8	8
1919.....	65.8	96	30	3.26	6.28	1.04	16	6	8	8

Climatological data for September, 1919.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.				Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation .01 in. or more.	Clear.	Pt. cloudy.		Cloudy.	Prevailing direction of wind.
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	28	63.8	-1.3	89	8	38	27	36	2.02	-1.90	0.78	0	8	22	1	7		Samuel J. Hixson. George S. Briggs. Brice E. Riker. William C. Harris.
Charlotteburg.....	Passaic.....	719	27	61.2 ^a	-1.1	88	7	32	27	41	4.00	-0.68	2.00	0	8	21	4	5	sw.	
Culvers Lake ^{††}	Sussex.....	848	18	.....	.....	.....	.....	.....	.....	.....	3.39	-0.42	1.30	0	11	17	4	9	se.	
Dover.....	Morris.....	600	35	62.5 ^b	-0.1	89	7 [†]	36	27	35	4.41	-0.07	2.70	0	12	11	11	8	.....	
Layton.....	Sussex.....	480	19	63.0	+1.2	92	7 [†]	34	27	36	2.40	-1.47	0.64	0	12	17	1	12	sw.	A. M. Depue. Irving G. Kern. D. Wilson Smith. Rev. W. August George.
Newton.....	Sussex.....	769	33	63.7	-0.1	88	7	38	27	30	1.75	-1.93	0.39	0	9	15	4	11	sw.	
Phillipsburg.....	Warren.....	363	37	64.8	-0.6	92	7	39	27	33	3.83	+0.05	1.28	0	10	18	2	10	nw.	
Sussex.....	Sussex.....	442	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Means and extremes...				63.2	-0.3	92	7 [†]	30	27	41	3.11	-0.92	2.70	0	10	17	4	9	sw.	
<i>The Red Sandstone Plain.</i>																				
Bergen Point ^{††}	Hudson.....	37	22	66.0 ^a	-0.7	92	8	45 ^b	19	28	3.83	-0.70	2.10	0	6	6	19	5	sw.	William H. Mitchell. J. W. Demmers. George Shields. L. B. Bonnett.
Boonton.....	Morris.....	400	29	63.4	.....	93	7	38	27 [†]	40	4.21	-0.28	2.05	0	11	21	2	7	nw.	
Chatham.....	Morris.....	330	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Elizabeth.....	Union.....	45	40	66.2	-0.8	93	7 [†]	42	18 [†]	34	4.41	+0.35	2.35	0	8	15	5	10	sw.	
Flemington.....	Hunterdon.....	140	31	67.1	+2.0	95	7	41	27	36	4.54	+0.56	3.00	0	7	15	7	8	w.	Hiram E. Deats. Charles J. Bates. S. K. Pearson, Jr. Thomas R. Hunt.
Highwood.....	Bergen.....	90	30	63.8	-0.4	89	8	41	18 [†]	30	6.08	+1.92	2.76	0	8	12	8	10	nw.	
Jersey City.....	Hudson.....	10	20	68.2	+1.0	95	7	47	27	28	4.78	+1.07	2.60	0	8	12	10	8	s.	
Lambertville.....	Hunterdon.....	80	32	64.2 ^a	-1.8	88	8	41	27	27	3.78	-0.40	2.18	0	5	14	3	13	n.	
Little Falls.....	Passaic.....	180	16	65.6		92	7	42	26	33	5.01	+0.41	2.30	0	13	16	5	9	w.	Montclair Water Co. Prof. William Wiener. N. J. Experiment Station. Hackensack Water Co.
Newark.....	Essex.....	159	77	65.8	-0.1	93	7	44	19	30	4.38	+0.53	2.65	0	7	19	4	7	nw.	
New Brunswick.....	Middlesex.....	110	66	66.0	0.0	92	8	43	19 [†]	30	2.01	-1.84	1.46	0	7	17	5	8	w.	
New Milford.....	Bergen.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5.93	.....	2.07	0	9	.....	.....	.....	.....	
Palisades Park.....	Bergen.....	80	4	64.1		93	7	40	27	32	5.18		2.84	0	8	14	5	11	nw.	George P. Kirsten. Marion T. Probert. John C. Sutphen. M. S. Taylor
Paterson.....	Passaic.....	80	48	68.1	+1.9	94	7	44	27	34	5.18	+0.74	2.50	0	7	13	3	14	sw.	
Plainfield.....	Union.....	100	32	64.8	-0.4	91	8	41	19	33	4.21	-0.24	3.04	0	10	14	7	9	nw.	
Pompton Plains.....	Morris.....	195	17	.....	.....	.....	.....	.....	.....	.....	6.28	+1.73	3.11	0	10	.....	.....	.....	.....	
Somerville.....	Somerset.....	60	37	65.8 ^a	+0.5	93	7 [†]	42	27	43	4.21	+0.55	2.90	0	7					A. A. Macdonald. Wm. H. Meeder. Hackensack Water Co. U. S. Weather Bureau.
South Orange.....	Essex.....	200	49	64.6	+0.5	88	7 [†]	44	19	25	4.42	+0.33	2.54	0	7	16	6	8	w.	
Woodcliff Lake.....	Bergen.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5.18	.....	1.79	0	7	.....	.....	.....	.....	
New York, N. Y.....	.....	365	49	66.5	0.0	91	8	51	27	22	3.60	+0.01	2.27	0	8	9	10	11	nw.	
Means and extremes...				65.5	+0.1	95	7 [†]	38	27 [†]	43	4.65	+0.32	3.11	0	8	15	6	9	nw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	38	68.5	+0.3	94	8	44	28	32	1.98	-1.83	1.00	0	6	20	4	6	se.	Henry A. Jorden. D. S. B. McCoy. U. S. Army. Melvin F. Wills.
Burlington.....	Burlington.....	12	33	68.4	+1.4	94	8	45	28	34	2.48	-1.44	1.38	0	7	23	1	6	sw.	
Camp Dix.....	Burlington.....	1	1	66.2	.....	92	8	40	19 [†]	35	3.13	.....	1.47	0	6	14	5	11	sw.	
Clayton.....	Gloucester.....	126	27	66.6	-0.1	90	8	43	27 [†]	36	1.65	-2.37	0.96	0	6	19	8	3	w.	
Hammononton.....	Atlantic.....	103	17								1.74	-1.92	0.88	0	4	22	4	4	w.	G. H. Parkhurst. Rev. W. A. Stanton. Wm. R. Hendrickson. James M. Armstrong.
Hightstown.....	Mercer.....	120	26	66.0	-0.6	91	8	40	27	31	2.03	-1.85	1.10	0	8	18	7	5	nw.	
Imlaystown.....	Monmouth.....	185	30	67.0	+0.3	96	8	40	28	38	2.80	-1.51	1.45	0	8	17	5	8	sw.	
Indian Mills.....	Burlington.....	76	30	66.8	+0.7	94	8	38	19 [†]	41	1.43	-2.74	0.98	0	5	17	4	9	se.	
Lakewood.....	Ocean.....	54	16	64.6	-0.8	90	8	38	19 [†]	33	2.25	-1.63	1.29	0	6	19	1	10	nw.	R. W. Holmau. Geo. L. Gillingham. William L. Flick. Lincoln Van Gilder.
Moorestown.....	Burlington.....	75	57	66.2	+0.2	89	8	45	28	30	2.42	-1.34	1.45	0	5	17	6	7	w.	
Northfield.....	Atlantic.....	25	12	.....	.....	.....	.....	.....	.....	.....	1.56	-1.74	0.54	0	7	.....	.....	.....	.....	
Pleasantville.....	Atlantic.....	26	21	.....	.....	.....	.....	.....	.....	.....	1.63	-1.78	0.64	0	6	22	3	5	.....	
Trenton.....	Mercer.....	190	48	66.0	-0.9	91	8	46	27	27	2.74	-0.85	1.21	0	7	11	8	11	n.	U. S. Weather Bureau. Frank R. Austin. H. C. Himes. Jos. H. Cohen. U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	26	66.8	-0.8	96	8	39	19	36	1.92	-1.44	0.88	0	6	14	13	3	se.	
Vineland.....	Cumberland.....	109	51	68.6 ^a	+1.7	94	8	44	27 [†]	35	2.35	-1.49	0.95	0	6	.....	.....	.....	.....	
Woodbine.....	Cape May.....	43	28	65.9	-0.4	88	8	40	19	33	1.04	-2.99	0.42	0	6	17	3	10	n.	
Philadelphia, Pa.....	.....	117	49	68.8	+1.4	92	8	50	27	22	2.82	-0.56	1.61	0	7	13	8	9	nw.	
Means and extremes...				66.7	+0.1	96	8	38	19 [†]	41	2.07	-1.79	1.47	0	6	18	5	7	sw.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	30	67.2 ^a	+0.3	92	8	48	19 [†]	32	3.31	+0.07	1.19	0	6	17	4	9	ne.	Miss Dorothy A. Alexander. U. S. Weather Bureau. U. S. Weather Bureau. William D. Martin, Jr. U. S. Weather Bureau.
Atlantic City.....	Atlantic.....	16	46	67.8	+0.2	86	8	50	28	24	1.47	-1.68	0.74	0	5	14	7	9	sw.	
Cape May City.....	Cape May.....	17	35	68.3	-0.7	88	9	48	28	19	1.59	-1.41	0.80	0	7	18	4	8	s.	
Long Branch.....	Monmouth.....	25	12	65.4	-0.6	94	8	42	28 [†]	26	2.26	-1.04	0.76	0	7	11	10	9	s.	
Sandy Hook.....	Monmouth.....	22	21	67.1	-0.3	89	8	53	27	19	2.80	-1.24	1.10	0	7	13	8	9	s.	
Means and extremes...				67.2	-0.2	94	8	42	28 [†]	32	2.29	-1.04	1.19	0	6	14	7	9	s.	
For the State.....				65.8	0.0	96	8	30	27	43	3.26	-0.80	3.11	0	8	16	6	8	sw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

†† Received too late to be included in the means.

Reference letters, *, b, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Pleasantville is Atlantic City; Milford and Woodcliff Lake are Hackensack.

Daily precipitation for September, 1919.

Stations.	Watershed.	Day of month.																															Total.	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>The Highlands and Kittatinny Valley.</i>																																		
Alvidere.....	Delaware.....	*	*	.66								*	.58			*																	2.02	
Charlotteburg.....	Passaic.....	*	*	2.00								.52	.35			.08								*	.78								4.00	
Ivers Lake.....	Delaware.....	.08	.02	1.30	.01					T.	.02	.41	.45			.05							.01	1.05									3.30	
Ver.....	Passaic.....	*	.52	.54	.01						*	.31	.25				.07		.03				.01	* 2.70									4.41	
Wynton.....	Delaware.....	.16	.11		.02					.02	.03	.64	.30			.08		.20					.02	.80				.02					2.40	
Wynton.....	Delaware.....	.39	.04	.03	.04					T.	.03	.38	.39			.05	T.	.05				T.	T.	.38				T.					1.75	
Phillipsburg.....	do.....	T.	.02	1.28	.03					.19	.12	.53	.52			T.	T.	.02					.51	.61									3.83	
Sex.....	Hudson.....																						.01	.94									\$	
<i>The Red Sandstone Plain.</i>																																		
Geu Point.....	Coast.....	T.	.42	.53						T.	T.	.26	T.	.34											2.10	.18							3.83	
Monton III.....	Passaic.....	.03	.25	.46	.40	T.					T.	.40	.40	T.		T.	.01	T.					.02	2.05	.19								4.21	
atham III.....	do.....																																	
abath.....	Coast.....	.03	.08	.65							.02	.31	.80			T.	T.						*	2.52										4.41
mingtou.....	Raritan.....	.11	T.	.60	T.						.19	.16	.42			T.	T.						.06	3.00									4.54	
rhwood.....	Hackensack.....	.01	.22	1.51						T.	.03	1.08	.24			T.						T.		.23	2.76								6.08	
ey City**.....	Coast.....	.04	.35	.62	T.					T.	.02	.29	.85			.01							*	2.60									4.78	
mberville.....	Delaware.....	.15	T.	.96	T.						*	.31	.18					T.					T.	2.18									3.78	
le Falls, III.....	Passaic.....	.04	.19	.74	.39	T.					.03	.57	.45	T.		.03	.02	.02					.01	2.30	.22								5.01	
ark**.....	Coast.....	.02	.28	.62						T.	T.	.40	.22			T.							.19	2.65						T.			4.38	
y Brunswick.....	Raritan.....	.09		.11	T.						.03	.15	.14				T.					T.	T.	1.46	.03								2.01	
y Milford.....	Hackensack.....		.49	1.44							.07	.70	.16			.06	.02						.92	2.07									5.93	
isades Park.....	Hackensack.....	.15	.03	1.07	T.					T.	.04	.29	.49			T.							*	3.11									5.18	
erson.....	Passaic.....	T.	.72	.68	T.					T.	.92	.25				.04	T.						.07	2.50									5.18	
infield.....	Raritan.....	.02	.03	.30	.01						.01	.21	.42			T.	.02						.15	3.04									4.21	
ampton Plains I.....	Passaic.....	.05	.38	.79	.81						T.	.63	.14	.12		T.	.08							3.11	.17								6.28	
erville.....	Raritan.....	.40	T.	.17	T.	T.					.11	.35											.18	2.90	.10								4.21	
th Orange.....	Rahway.....	T.	.38	.70	T.						T.	.31	.30			.01							.18	2.54									4.42	
odeliffe Lake.....	Hackensack.....		.16	1.38							.38	.52				.05							.90	1.79									5.18	
y York, N. Y***	Coast.....	.04	.30	.37	T.					T.	.02	.55	.05			T.						T.		.42	1.85								3.60	
<i>The Southern Interior.</i>																																		
lgeton.....	Coast.....	.25		T.							.45	.08											.10	1.00							.10		1.98	
lington.....	Delaware.....	.06		.19							*	.42	.43										*	1.38									2.48	
ap Dix.....	Delaware.....	.08		.02							.38	.90	.28											1.47									3.13	
yton.....	Maurice.....	.06		.10		T.					.40	.11											.96	.02									1.65	
nmonton.....	Mullica.....	.12									.21	.53											T.	.88									1.74	
hstown.....	Raritan.....	.20		.03							.02	.30	.34	.01										1.10	.03								2.03	
aystown.....	Delaware.....	.11	.01	.04							.39	.77	.01											1.45	.02								2.80	
ian Mills.....	Mullica.....	.08		.02						T.	.20	.15											T.	.98									1.43	
ewood.....	Metedeconk.....	.05		.17							.14	.60	.20			T.								1.29									2.25	
restown.....	Delaware.....	.08		.16							.33	.40												1.45									2.42	
thfield.....	Coast.....	.14		.09							.06	.54	.12								T.			.54	.07								1.56	
asantville.....	Coast.....	.10		.11							.08	.63	.07											.64									1.63	
aton***.....	Delaware.....	.06	T.	.12	T.					.01	.34	1.00				T.							.58	.63									2.74	
kerton.....	Coast.....	.14	.28	.22							.34	.00												.88									1.92	
land.....	Maurice.....	.18	T.								1.16	.04											.01	.95	.01								2.35	
ddbine.....	Coast.....	.17	.16	T.						.11	T.	.13	T.										T.	.42	.05								1.04	
delphia, Pa.....	Delaware.....	.15		.24	T.						.13	.62	.02			T.							.83	.83									2.82	
<i>The Sea Coast.</i>																																		
ary Park.....	Coast.....	.06	*	1.10							.65	.31												1.19									3.31	
ntic City***.....	do.....	.02	.10	T.							.72	.10				T.					.01		T.	.53									1.47	
g May City.....	do.....	.18		.02						T.	.22	.60	.20										T.	.36	.01								1.59	
g Branch**.....	do.....	.09	.76								.40	.09	.29										.19	.44									2.26	
ly Hook***.....	do.....	.05	.54	.59						T.	.15	.37	T.										T.	.21	.89								2.80	

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded.

|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.

* Precipitation included in the next following measurement. **Precipitation for 24-hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.			Moisture.		Sun- shine	
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	Percentage of possible sunshine.
							Miles per hour.	Direction.	Date.			
ntic City.....	30.05	30.41	28	29.57	11	7	19	sw.	11	80	79	68
y May City.....	30.08	30.44	28	29.67	11	6	21	nw.	12			
y Branch.....							50	nw.	12			
ark.....							30	w.	25	64*		60
York, N. Y.....	30.03	30.42	28	29.57	11	14	49	nw.	12	79	73	59
ades Park.....	30.03	30.43	28	29.58	11							
adelphia, Pa.....	30.06	30.43	28	29.58	11	9	26	nw.	3	76	72	62
ly Hook.....	30.03	30.41	28	29.56	11	14	39	w.	12	81	79	72
ton.....	30.03	30.42	28	29.56	11	10	33	nw.	12	82	72	59

Daily temperatures for September, 1919.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.
<i>The Highlands and Kittatinny Valley</i>																																
Belvidere.....	Maximum ...	67	72	72	69	76	82	88	89	75	75	82	75	65	76	68	73	75	69	68	83	81	79	74	72	77	69	69	74	75	79	74.9
	Minimum	61	62	56	50	45	52	58	53	64	59	64	55	49	41	50	56	56	42	43	62	61	68	55	47	48	48	38	41	45	50	52.6
Charlotteburg.....	Maximum ...	65	67	62	75	70	79	88	87	75	71	69	70	72	69	74	70	66	65	80	78	77	65	69	73	64	68	74	74	70	71.8	
	Minimum	55	59	58	55	46	64	62	57	55	61	53	50	39	59	59	52	34	35	58	58	62	56	41	43	46	32	33	36	49	50.6	
Dover.....	Maximum ...	67	73	76	73	76	82	89	89	74	73	79	68	71	72	65	67	73	64	69	80	79	76	70	71	75	65	67	74	72	76	73.4
	Minimum	58	58	54	42	51	65	67	57	56	63	54	49	44	52	57	52	39	39	60	62	67	52	45	47	44	36	39	40	55	51.6	
Layton.....	Maximum ...	67	68	73	75	75	81	92	92	77	77	82	72	73	77	65	71	74	70	67	84	82	77	72	73	77	67	70	72	71	74	75.1
	Minimum	59	60	44	46	40	50	57	63	63	63	62	53	53	42	51	53	48	37	38	60	59	68	56	45	46	43	34	38	42	53	50.9
Newton.....	Maximum ...	74	72	69	71	71	79	88	87	83	73	79	74	69	70	68	69	70	65	67	80	80	79	70	70	74	69	64	73	73	74	73.5
	Minimum	59	59	58	56	61	55	63	67	58	56	62	63	49	49	54	55	56	41	43	59	56	58	44	52	46	38	43	45	56	53.9	
Phillipsburg.....	Maximum ...	68	73	74	73	77	85	72	91	74	74	84	70	73	77	68	75	75	69	69	85	84	79	70	74	79	68	69	75	76	78	75.9
	Minimum	61	62	56	52	47	54	62	65	60	59	63	55	49	48	55	57	52	44	43	62	64	68	53	49	50	48	39	42	43	51	53.8
Sussex.....	Maximum ...																															
	Minimum																															
<i>The Red Sandstone Plain.</i>																																
Bergen Point.....	Maximum ...	78	71	70	79	75	85	91	92	80	71	80	73	73	77	68	70	76	66	71	83	82	78	76	70	78	68	68	73	73	79	75.8
	Minimum	61	64	54	54	52	57	66	60	57	64	56	49	49	56	58	56	49	45	64	64	68	59	54	54	55	46	49	49	55	56.2	
Boonton§§.....	Maximum ...	69	73	71	76	77	80	93	89	65	78	81	71	73	75	68	70	74	71	72	82	85	77	62	72	75	66	70	78	75	76	74.8
	Minimum	60	61	60	53	49	51	55	66	60	56	59	57	46	49	53	56	57	41	39	41	61	62	60	45	48	54	38	38	40	42	52.0
Elizabeth.....	Maximum ...	76	73	71	79	78	85	93	93	81	74	82	74	76	78	68	72	78	68	75	86	85	80	75	75	79	72	68	76	77	81	77.6
	Minimum	62	62	61	53	53	55	65	69	63	58	65	56	49	47	55	56	55	42	42	62	62	65	59	47	50	50	42	42	44	54	54.8
Flemington.....	Maximum ...	84	76	74	73	79	84	95	92	88	73	86	80	76	80	70	77	75	73	72	80	85	82	76	75	79	68	72	79	79	78	78.7
	Minimum	62	65	66	55	49	55	63	68	64	59	65	57	51	49	56	57	57	45	43	60	64	67	57	47	54	52	41	43	43	50	55.5
Highwood.....	Maximum ...	69	70	68	73	73	80	88	89	78	72	77	71	71	73	65	68	72	64	70	80	80	75	73	68	77	66	64	71	72	75	73.1
	Minimum	62	64	62	52	47	56	66	67	58	57	63	57	49	47	53	56	51	41	42	62	66	68	56	48	52	50	41	42	42	54	54.4
Jersey City.....	Maximum ...	73	71	68	80	77	87	95	94	87	71	81	77	77	79	79	72	79	72	74	82	84	78	77	72	81	75	68	75	74	80	78.0
	Minimum	62	64	61	58	55	60	67	71	63	60	59	57	52	55	60	61	59	48	52	62	66	68	61	52	57	56	47	50	49	58	58.3
Lambertville.....	Maximum ...	60	72	71	72	73	79	86	88	81	70	79	72	70	74	70	72	70	65	70	81	82	80	70	74	72	68	63	68	69	76	74.5
	Minimum	61	61	56	54	49	56	63	67	62	68	57	50	48	54	54	56	43	43	62	66	67	67	56	52	49	41	43	44	54	54.9	
Little Falls.....	Maximum ...	76	73	72	75	75	84	92	91	67	78	84	77	80	80	73	78	76	71	75	82	85	80	67	74	79	70	69	79	75	77	77.1
	Minimum	63	63	58	49	55	60	68	62	58	60	59	52	48	48	58	55	45	44	47	63	66	62	49	51	54	42	43	46	49	50	54.2
Newark.....	Maximum ...	70	71	63	76	77	83	93	91	64	72	81	69	72	75	67	72	74	65	74	81	79	77	71	71	75	65	64	75	75	79	74.2
	Minimum	64	65	62	60	56	61	67	74	58	58	64	58	52	55	60	60	57	46	44	61	63	66	54	51	56	52	45	49	49	57	57.5
New Brunswick.....	Maximum ...	79	71	71	75	77	83	91	92	84	71	83	80	72	75	74	71	74	73	72	84	84	82	81	73	77	74	65	73	70	79	77.0
	Minimum	64	63	59	55	49	57	66	69	62	58	64	58	50	56	56	56	45	43	60	64	69	57	49	53	52	43	43	43	52	55.5	
Palisades Park.....	Maximum ...	72	70	67	78	77	84	93	87	78	73	77	71	71	73	62	67	73	63	67	77	80	85	73	71	78	68	67	74	74	78	74.3
	Minimum	62	63	62	52	46	56	66	67	59	56	63	54	49	47	54	54	51	41	42	63	65	69	54	47	52	43	40	42	43	54	53.9
Paterson.....	Maximum ...	70	71	69	79	80	85	94	93	87	75	83	72	78	78	73	70	78	71	72	83	85	80	77	75	81	71	70	79	77	80	77.9
	Minimum	64	64	62	57	68	69	67	73	59	57	64	62	50	51	57	59	68	54	45	62	65	75	59	49	52	54	44	45	47	46	58.3
Plainfield.....	Maximum ...	74	72	72	76	75	82	89	91	76	72	81	71	72	75	69	70	75	68	74	83	84	78	71	73	79	68	68	74	74	79	75.5
	Minimum	62	63	59	52	49	55	64	66	59	58	64	56	47	46	54	55	56	43	41	59	62	66	53	46	49	50	46	44	47	53	54.1
Somerville.....	Maximum ...	79	72	72	75	80	82	93	93	92	86	78	78	78	78	76	66	78	69	74	88	87	84	78	72	78	74	68	74	72	79	78.5
	Minimum	60	62	56	54	45	49	63	63	63	63	63	63	45	50	58	60	56	44	44	62	66	69	48	51	53	42	44	43	52	53.2	
South Orange.....	Maximum ...	70	73	68	74	80	88	88	88	78	73	80	70	72	70	72	67	70	72	64	68	80	80	77	72	69	75	65	63	70	69	75.1
	Minimum	63	64	62	59	56	66	70	59	58	64	56	45	45	50	56	59	38	47	44	62	63	67	55	49	52	53	46	45	47	55	56.1
New York, N. Y.....	Maximum ...	72	71	68	76	76	82	90	91	77	70	81	70	72	74	66	66	73	67	67	81	78	76	70	69	76	66	65	72	72	76	73.7
	Minimum	62	65	62	62	59	61	688																								



Size of Shades

- 0 to 1 inch.
- 1 to 2 inches.
- 2 to 4 inches.
- 4 to 6 inches.
- Over 6 inches.

Based on 650 records.

Scale of Miles
0 10 20 30 40 50 60 70 80 90 100
Scale of Kilometers
0 10 20 30 40 50 60 70 80 90 100

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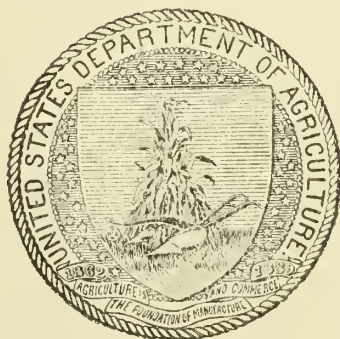
U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU
CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

OCTOBER, 1919.

BY
G. HAROLD NOYES
METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
NOVEMBER 18, 1919.

Departure of the Mean Temperature from the Normal, October, 1919.



Shaded portions show excess (+)
 Unshaded portions show deficiency (-)
 Lines show amount of excess or deficiency.

Climatological data for October, 1919.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.							Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation .01 in. or more.	Clear.	Pt. cloudy.	Cloudy.		
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	28	57.7	+4.5	83	3	30	13	34	4.35	+0.51	0.96	0	12	8	8	15	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	27	54.0	+3.6	84	3	27	8†	37	4.96	+0.55	1.04	0	11	14	8	9	w.	George S. Briggs.
Culvers Lake††.....	Sussex.....	848	18	.....	.....	.....	.....	24	13	.....	4.54	+0.89	0.82	0	18	10	7	14	se.	Brice E. Riker.
Dover.....	Morris.....	600	35	54.6	+3.9	85	3	31	13	32	4.97	+0.97	1.19	0	14	5	12	14	.....	William C. Harris.
Layton.....	Sussex.....	480	19	53.8	+4.2	91	3	25	13	38	4.22	+0.89	0.75	0	16	12	1	18	sw.	A. M. Depue.
Newton.....	Sussex.....	769	38	55.3 ^b	+3.6	82	3	30	13	35	4.87	+1.16	0.84	0	19	6	7	18	sw.	Irving G. Kern.
Phillipsburg.....	Warren.....	363	37	56.3	+3.4	85	3	33	13	34	4.14	+0.54	1.06	0	17	11	3	17	sw.	D. Wilson Smith.
Sussex.....	Sussex.....	442	23	56.6	+4.4	87	3	.....	.....	36	4.08	+0.73	0.75	0	13	8	9	14	s.	Rev. W. August George.
Means and extremes...				55.5	+3.8	91	3	24	13	38	4.52	+0.78	1.19	0	15	9	7	15	sw.	
<i>The Red Sandstone Plain.</i>																				
Bergen Point††.....	Hudson.....	37	22	58.8	+4.5	86	3	.....	.....	35	2.77	-1.31	0.92	0	10	3	18	10	se.	William H. Mitchell.
Boonton.....	Morris.....	400	29	55.0	.....	85	3	29	13	41	3.90	+0.06	0.93	0	16	17	7	7	ne-sw	J. W. Demmers.
Chatham.....	Morris.....	330	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	George Shields.
Elizabeth.....	Union.....	45	40	59.7	+5.0	88	3	33	13	33	4.24	+0.42	1.05	0	15	8	14	9	e.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	31	60.4	+6.3	89	3	35	8†	37	3.68	+0.23	0.85	0	14	10	8	13	sw.	Hiram E. Deats.
Highwood.....	Bergen.....	90	30	57.4	+4.7	85	3	32	13	31	2.47	-2.06	0.70	0	16	8	8	15	e.	Charles J. Bates.
Jersey City.....	Hudson.....	10	20	60.8	+4.2	88	3	38	13	26	3.78	+0.03	0.88	0	16	6	13	12	e.	S. K. Pearson, Jr.
Lambertville.....	Hunterdon.....	80	32	59.6 ^a	+6.4	84	28	33	13	31	2.90	-0.97	.....	0	13	.....	.....	.....	e-sw	Thomas R. Hunt.
Little Falls.....	Passaic.....	180	16	57.1	.....	86	3	35	13	30	3.92	+0.08	0.84	0	18	10	4	17	e.	Montclair Water Co.
Newark.....	Essex.....	159	77	57.7	+3.3	88	3	39	13†	26	4.05	+0.28	0.95	0	15	11	9	11	sw.	Prof. William Wiener.
New Brunswick.....	Middlesex.....	110	66	60.4	+5.8	87	3	36	8†	36	3.13	-0.46	0.94	0	16	10	12	9	sw.	N. J. Experiment Station.
New Milford.....	Bergen.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.76	.....	0.79	0	14	.....	.....	.....	.....	Hackensack Water Co.
Palisades Park.....	Bergen.....	80	4	56.4	.....	87	3	31	13	32	3.22	.....	0.85	0	15	11	8	12	ne.	George P. Kirsten.
Paterson.....	Passaic.....	80	48	60.0	+5.6	90	3	38	13	40	3.64	+0.49	0.78	0	18	7	1	23	sw.	Marion T. Probert.
Plainfield.....	Union.....	100	32	58.0	+5.0	86	3	33	8†	34	4.33	+0.68	1.01	0	18	8	14	9	nw.	John C. Sutphen.
Pompton Plains.....	Morris.....	195	17	.....	.....	.....	.....	.....	.....	.....	4.25	+0.49	0.81	0	14	.....	.....	.....	.....	M. S. Taylor.
Kearny.....	Hudson.....	.....	.....	59.5	.....	90	3	35	13	33	3.89	.....	0.95	0	10	11	7	13	ne.	Wm. J. Chandler, M. D.
Somerville.....	Somerset.....	60	37	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Peter V. D. Hardcastle.
South Orange.....	Essex.....	200	49	56.3	+3.4	82	3	36	13	29	3.62	-0.19	0.95	0	12	10	7	14	e-w	Wm. H. Meeder.
Woodcliff Lake.....	Bergen.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.61	.....	0.87	0	13	.....	.....	.....	.....	Hackensack Water Co.
New York, N. Y.....	.....	365	49	58.4	+2.8	85	3	39	13	33	3.17	-0.54	0.83	0	14	6	9	16	e.	U. S. Weather Bureau.
Means and extremes...				58.5	+4.9	90	3	29	13	41	3.62	-0.16	1.05	0	15	9	9	13	e.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	38	63.4	+6.7	92	3	36	13	35	3.54	+0.01	1.55	0	10	12	5	14	sw.	Henry A. Jorden.
Burlington.....	Burlington.....	12	33	61.4	+6.7	89	3	36	13	30	2.73	-0.73	1.11	0	9	15	6	10	sw.	D. S. B. McCoy.
Camp Dix.....	Burlington.....	.....	1	60.2	.....	88	3	34	13	32	2.67	.....	0.84	0	13	4	6	21	sw.	U. S. Army.
Clayton.....	Gloucester.....	126	27	61.2	+6.1	88	3	34	8	49	2.59	-0.92	1.06	0	10	4	9	18	sw.	Marvin Porch.
Hammononton.....	Atlantic.....	103	17	.....	.....	.....	.....	.....	.....	.....	3.22	-0.26	1.39	0	8	16	9	6	se.	G. H. Parkhurst.
Hightstown.....	Mercer.....	120	26	58.8	+5.1	84	3	32	13	35	3.48	+0.25	1.19	0	15	8	11	12	se.	Rev. W. A. Stanton.
Imlaystown.....	Monmouth.....	185	30	.....	.....	90	3	.....	.....	.....	2.95	-1.12	1.15	0	11	.....	.....	.....	.....	Wm. R. Hendrickson.
Indian Mills.....	Burlington.....	76	30	60.7	+6.3	90	3	33	9†	39	2.65	-0.93	1.27	0	12	9	7	15	sw.	James M. Armstrong.
Lakewood.....	Ocean.....	54	16	59.3	+4.0	85	3	31	9	37	2.35	-0.35	1.00	0	12	7	3	21	e.	R. W. Holman.
Moorestown.....	Burlington.....	75	57	60.2	+6.0	84	3	35	13	33	2.75	-0.89	1.01	0	10	.....	.....	.....	.....	Geo. L. Gillingham.
Northfield.....	Atlantic.....	25	12	.....	.....	.....	.....	.....	.....	.....	2.01	-1.49	0.93	0	7	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	21	.....	.....	.....	.....	.....	.....	.....	2.40	-1.28	0.98	0	9	14	5	12	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	48	58.5	+2.9	87	3	36	13	34	3.09	-0.32	1.07	0	15	5	8	18	n.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	26	62.2	+7.4	90	3†	35	8†	37	3.64	-0.03	1.21	0	11	11	10	10	sw.	Frank R. Austin.
Vineland.....	Cumberland.....	109	51	63.4 ^b	+8.0	91	3	36	13	35	3.79	+0.33	1.95	0	9	.....	.....	.....	.....	H. C. Himes.
Woodbine.....	Cape May.....	43	28	62.0	+5.4	88	3	33	19	45	2.44	-1.19	0.93	0	8	8	7	16	w.	Jos. H. Cohen.
Philadelphia, Pa.....	.....	117	49	61.2	+4.9	90	3	41	13	32	2.59	-0.51	1.03	0	15	5	11	15	n.	U. S. Weather Bureau.
Means and extremes...				60.9	+5.9	92	3	31	9	49	2.39	-0.59	1.95	0	11	10	7	14	sw.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	30	.....	.....	88	3	.....	.....	.....	2.20	-1.58	0.74	0	10	12	10	9	ne-sw	Miss Dorothy A. Alexander.
Atlantic City.....	Atlantic.....	16	46	61.8	+4.4	90	3	41	13	31	2.11	-1.19	0.86	0	12	8	11	12	sw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	35	63.1	+3.5	88	3	41	13	24	2.92	-0.38	1.24	0	13	9	9	13	e.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	12	58.0	+3.0	86	28	39	8†	37	3.71	+0.06	0.70	0	13	6	9	16	ne-w	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	21	59.6	+2.9	83	3	46	13	28	2.61	-0.99	0.79	0	15	6	12	13	ne.	U. S. Weather Bureau.
Means and extremes...				60.6	+3.4	90	3	39	8†	37	2.71	-0.82	1.24	0	13	9	10	12	ne.	
For the State.....				59.0	+4.9	92	3	24	13	49	3.43	-0.21	1.95	0	13	9	8	14	sw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

†† Received too late to be included in the means.

Reference letters, a, b, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Pleasantville is Atlantic City; Milford and Woodcliff Lake are Hackensack.

Daily precipitation for October, 1919.

Stations.	Watershed.	Day of month.																															Total.		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
<i>The Highlands and Kittatinny Valley.</i>																																			
Belvidere.....	Delaware.....	.47	.25				.11							.75	.12	.96	.10	.74						.10	.29							.42	.04	4.15	
Charlotteburg.....	Passaic.....	* .55					.35				.10			.72		1.04	.36						.25	.31								.90		4.06	
Culvers Lake.....	Delaware.....	.30	.21	.01		T.	.25				.05			.52		.82	.05	.03	.52					.15	.22	.08		.01	.02	.39		.22	.09	4.54	
Dover.....	Passaic.....	* .58					.09				.09			1.19		1.01	.83						.11	.27				.06					.57		4.95
Layton.....	Delaware.....	.15	.38	T.			.28				.02	.11		.75		.64	.09	.02	.44					.11	.12	.13		T.	T.	.21		.26	.51	4.22	
Newton.....	Delaware.....	.33	.34	.02		.02	.24				.06			.83		.84	.17	.05	.40					.22	.15	.16		.06	.01	.16		.60	.21	4.57	
Phillipsburg.....	do.....	.44	.18	T.		T.	.07				.05	.03	.21	.34		1.05	.01	.76					.10	.33	.05		T.	.38	.02		.08	.04	4.14		
Sussex.....	Hudson.....	.22	.33				.23				.04	.06		.71		.75		.02	.55						.11						.02	.54		4.08	
<i>The Red Sandstone Plain.</i>																																			
Bergen Point.....	Coast.....	.33	.30	T.	T.		.3				.03			T.	.92		.32						.07		.23	T.					.07	.20	2.77		
Boonton.....	Passaic.....	.10	.22	.15			T.	.08			.08			.75	.16	.02	.93	T.	.46					.06		.23	T.			.08	.18		.01	.33	3.90
Chatham H.....	do.....																																		
Elizabeth.....	Coast.....	.37	.27	.02			.01	.11			.07			1.05			1.01	.56					.02	.08		.31				.15		*	.21	4.24	
Flemington.....	Raritan.....	.58	.14	T.			.08				.02			.85				.39					T.		.07	.12	.33	T.		T.	.19		.04	.13	3.68
Highwood.....	Hackensack.....	.21	.14	.02	T.	.02	.08				.10	T.	.70					.29					.04	.10	.20	.03		T.	.02	.08	.12	.32		2.47	
Jersey City**.....	Coast.....	.25	.20				.50				.05			.87		.45	.43	T.	.37				.02	.04	.15	.08	T.			.12		.06	.18	3.78	
Lambertville.....	Delaware.....	* .19					.78				T.			.88		.45	T.	.16														.23	.06	2.90	
Little Falls.....	Passaic.....	.11	.19	.17			.01	.01		.06		.11		.74	.15		.84	.03	.48					.10		.28			.07	.13		.02	.42	3.92	
Newark**.....	Coast.....	.35	.32				T.	.05			.04			.29	.58		.95	T.	.54					.10	.30			.01	.20	.07	T.	.20	.10	4.05	
New Brunswick.....	Raritan.....	.42	.17	.03			T.	.07			.03			.94		.42	.17	T.	.14					.09	.07	.55		.01	T.	.10		.07	.05	3.13	
New Milford.....	Hackensack.....	.21	.13				.09				.08			.43	.51		.79		.61					.11	.21				.04	.04	.31	.20	3.16		
Palisades Park.....	Hackensack.....	.21	.13			.02	.05				.04			.85		.65	T.	.41					.01	.13		.27		.03		.08		.14	.20	3.22	
Patterson.....	Passaic.....	.22	.15	.02	T.		.09				.06			.70	.02	.78	.08	.02	.52				.02	.13	.20			.05		.15	.10	.33	3.64		
Plainfield.....	Raritan.....	.29	.31	.02	.03	.01	.10				.03			1.01		.87	.04	.02	.55					.09	.51	.07				.23	.12	.03	4.33		
Pompton Plains I.....	Passaic.....	.11	.16	.18							.13			.68	.15		.81		.72					.13	.28				.07	.18		.51		4.25	
Keamy.....	Coast.....	.30	.24				T.				T.	.10		.82		.95	T.	.53						.12		.30						.33	3.49		
Somerville.....	Raritan.....																																		
South Orange.....	Rahway.....	.25	.30	T.			.09				T.	.08	*	.89		*	.95	.58						.12	.32	T.						.04	T.	3.62	
Woodcliffe Lake.....	Hackensack.....	.22	.12				.10				.17	.04	.21	.33		.87		.51						.12	.27				T.	T.	.10		.39	.28	3.61
New York, N. Y***.....	Coast.....	.23	.18				T.	.25			.05			.36	.47		.78	T.	.22				T.	.07	.28			T.	T.	.06	.03	.16	.03	3.17	
<i>The Southern Interior.</i>																																			
Bridgeton.....	Coast.....	.08	.10								T.			1.55	.15	.32	.32	.20							.70	.08					.04			3.54	
Burlington.....	Delaware.....	.60	.11	.02			T.					.23	*	1.11		.18	.05		.25													T.		2.73	
Camp Dix.....	Delaware.....	.06	.09				.03				.01	T.	.04	.84		.23		.09						.55	.05	.02			.05				.01		2.67
Clayton.....	Maurice.....	.16	.09				.03							1.06		.14	.07	.10	.20					.54	.20									2.59	
Hammonton.....	Mullica.....	* .24									.12			1.39	.01	.18		.38	.05					.85										3.22	
Hightstown.....	Raritan.....	.60	.14	.03		.02	.02				.06			1.19	T.	.27	.06	.40						.13	.29	.22	.01						.04		3.48
Inlaystown.....	Delaware.....	.72	.08	.02		.03					.06			1.15		.11	.05	.54						.12								.07		2.95	
Indian Mills.....	Mullica.....	.12	.10			.02					.03			.20	1.07		.15	.03	.20					.04	.36	.33								2.65	
Lakewood.....	Metedeconk.....		.10			T.		.03			T.			1.00		.31		.03	.22				.02	.02	.30	.22	.02		T.			T.	.08	2.35	
Moorestown.....	Delaware.....	.23	.12				.08				.05	*	1.01		.20		.50							.01	.40				.15					2.75	
Northfield.....	Coast.....	.09	.08											.93	.04	.30							T.		.54	.03								2.01	
Pleasantville.....	Coast.....	.05	.05											.98	T.	.30	T.	.06					.05		.54	.35	.02							2.40	
Trenton***.....	Delaware.....	.73	.08	.01	T.		.01			.05	T.	T.	1.07		.31	T.	.18	.01					T.	.12	.36	.03	T.	T.	.01			.02	.10	3.09	
Tuckerton.....	Coast.....	.28	.07				.04				.06			1.21		.33		.53	.20				.15		.26	.51								3.64	
Vineland.....	Maurice.....	.06	.05				T.				.09			1.95		.27	.02	.62						.33	.40									3.79	
Woodbine.....	Coast.....	T.	.10			.02								.93		.35							.08		.41	.52								2.44	
Philadelphia, Pa.....	Delaware.....	.11	.05	.01	T.		.01				.01	.03	.16	.89		.19	T.	.44	.05					.01	.46	.01			.16			T.	T.	2.59	
<i>The Sea Coast.</i>																																			
Asbury Park.....	Coast.....	* .39					.01							.74	*	.40		.01							.45							.05	.15	2.20	
Atlantic City***.....	do.....	.07	.03			T.	.01	.01						.46	.40		.21	T.	.04	T.				.01	.57	.29	T.							2.11	
Cape May City.....	do.....	.01	T.								.01			1.24	.10	.24	.01	.02	.11					.16		.69	.28	.04		.01				2.92	
Long Branch**.....	do.....	.49	.10				.33				.01	.30	.46		.17		.10						.07		.70	.66						.30	.02	3.71	
Sandy Hook***.....	do.....	.27	.12			T.		.03			.02	T.	.29	.50		.44		.37						.01	.09	.25				.02	.01		.16	.03	2.61

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded.

|| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.

* Precipitation included in the next following measurement. **Precipitation for 24-hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.

Daily temperatures for October, 1919.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.		
<i>The Highlands and Kittatinny Valley</i>																																		
Belvidere.....	Maximum ...	52	61	83	74	77	77	75	70	63	79	75	61	64	60	68	72	68	64	58	58	64	63	58	60	65	61	74	79	65	65	64	67.0	
	Minimum	49	49	59	60	61	59	48	41	41	57	61	44	30	38	52	57	57	52	35	38	42	53	39	50	42	44	54	61	38	41	48	48.4	
Charlotteburg.....	Maximum ...	58	59	84	70	77	74	67	60	61	77	74	57	60	56	70	72	65	60	65	54	55	59	56	59	59	60	69	67	63	54	60	63.9	
	Minimum	44	47	55	55	59	64	50	27	27	55	57	42	28	34	50	52	49	30	28	33	43	50	34	48	41	48	48	57	37	31	40	44.0	
Dover.....	Maximum ...	56	58	85	66	78	76	71	59	61	80	71	51	58	54	69	75	63	61	65	52	60	61	55	57	55	61	71	80	57	48	72	64.1	
	Minimum	46	49	58	58	61	56	45	32	32	59	55	38	31	38	51	56	45	34	33	37	46	40	36	45	44	52	54	46	38	37	48	45.0	
Layton.....	Maximum ...	60	55	91	75	78	79	70	61	60	85	72	50	62	50	70	72	62	63	68	56	61	61	56	59	56	61	70	80	57	42	71	64.0	
	Minimum	45	47	55	60	61	65	42	28	30	50	50	42	25	35	49	53	40	29	30	28	38	38	30	45	45	52	50	52	35	35	40	42.7	
Newton.....	Maximum ...	62	59	82	79	76	75	68	60	59	79	75	59	58	53	69	71	69	59	58	64	60	59	55	59	57	60	69	76	57	....	71	65.6*	
	Minimum	45	47	57	58	58	58	58	32	35	56	....	41	30	40	50	52	48	33	40	36	42	....	38	48	44	52	53	56	36	38	36	45.0*	
Phillipsburg.....	Maximum ...	57	62	85	66	80	78	72	59	62	79	78	51	62	55	68	75	63	61	66	54	62	56	58	56	62	71	79	57	52	74	65.3		
	Minimum	48	50	60	60	61	59	46	35	37	61	51	40	33	42	58	58	48	36	35	39	47	44	41	47	46	53	56	45	40	43	51	47.3	
Sussex.....	Maximum ...	62	58	87	80	78	80	77	62	66	84	79	65	65	59	72	74	72	66	67	65	62	56	63	60	61	69	79	66	48	72	67.3		
	Minimum	46	48	51	61	51	66	45	30	40	59	54	43	....	37	52	52	49	31	31	43	42	41	33	42	41	43	51	59	35	37	37	46.0*	
<i>The Red Sandstone Plain.</i>																																		
Bergen Point.....	Maximum ...	63	64	86	76	78	78	75	64	66	81	78	58	68	59	71	80	74	62	68	57	64	59	60	60	59	64	69	82	57	56	70	67.9	
	Minimum	48	51	51	61	61	65	51	40	38	60	56	43	....	42	52	58	56	44	39	42	50	49	44	51	47	40	55	55	42	43	55	49.6*	
Boonton§§.....	Maximum ...	53	66	85	66	77	78	72	58	64	79	80	49	62	56	71	74	64	63	66	57	60	62	58	63	60	61	71	80	60	58	74	66.0	
	Minimum	47	46	52	58	57	61	48	31	30	35	62	46	29	34	44	52	52	34	33	31	40	49	37	39	42	45	52	56	41	37	40	43.9	
Elizabeth.....	Maximum ...	65	63	88	83	82	78	77	64	68	82	84	66	61	58	74	80	76	65	69	60	65	66	60	60	62	63	72	84	71	50	77	70.1	
	Minimum	48	51	60	60	61	68	48	36	35	60	65	45	33	41	51	51	55	38	36	43	48	54	42	52	47	49	55	60	39	42	49	49.3	
Flemington.....	Maximum ...	68	63	89	80	80	81	79	67	63	83	82	83	63	59	72	79	76	66	68	64	63	65	58	58	58	63	75	82	67	54	77	70.5	
	Minimum	48	50	62	61	62	67	51	35	37	60	64	46	35	42	54	58	54	39	38	42	45	55	51	52	46	53	55	60	39	44	48	50.2	
Highwood.....	Maximum ...	63	61	85	73	76	76	72	58	64	79	80	63	58	57	79	76	74	58	65	55	69	59	60	58	63	69	81	59	52	72	67.2		
	Minimum	47	50	59	59	62	67	50	33	33	61	61	44	32	40	50	56	52	35	34	40	48	46	38	51	44	49	54	58	39	38	44	47.7	
Jersey City.....	Maximum ...	70	63	88	82	78	78	76	67	68	80	84	70	60	59	68	78	73	63	68	65	65	60	59	63	68	83	68	83	68	56	73	69.6	
	Minimum	50	53	61	62	62	68	53	43	42	62	67	45	38	46	54	60	55	44	44	44	51	57	47	52	48	53	48	60	44	45	54	52.1	
Lambertville.....	Maximum ...	56	62	81	79	76	75	72	70	63		78	76	55	57	67	75					79	63	62	61	56	57	62	69	84	70	66	71	68.2*
	Minimum	47	50	56	64	61	68	49	52	38		64	45	33	41	51	51					51	48	55	42	51	48	54	56	58	48	40	60	51.1*
Little Falls.....	Maximum ...	56	66	86	66	81	78	67	66	64	84	78	58	62	58	72	80	65	66	65	56	61	63	59	62	58	63	70	74	58	60	74	67.2	
	Minimum	50	49	54	60	60	63	53	37	36	42	66	49	35	46	48	54	55	40	38	40	43	50	42	44	44	47	56	60	44	42	42	48.0	
Newark.....	Maximum ...	56	63	88	64	79	79	72	58	65	82	81	56	59	57	66	73	62	60	65	53	59	62	57	60	57	63	67	81	56	56	73	65.5	
	Minimum	48	53	63	61	62	64	47	40	42	64	56	47	39	48	46	48	49	44	39	47	47	50	45	51	47	52	60	47	43	42	57	49.9	
New Brunswick.....	Maximum ...	72	64	87	84	79	78	78	72	65	81	81	79	58	59	70	79	78	62	66	66	63	63	61	68	67	70	82	69	56	72	70.7		
	Minimum	48	50	64	60	61	70	50	36	37	61	65	45	36	42	53	58	55	41	38	42	42	56	44	53	46	48	55	59	41	43	53	50.1	
Palisades Park.....	Maximum ...	56	62	87	68	78	78	74	58	65	81	81	54	60	58	72	78	65	61	66	56	62	64	59	61	60	64	69	81	56	54	73	66.5	
	Minimum	48	50	60	59	62	58	44	33	33	61	54	39	31	40	50	57	44	35	35	39	48	41	39	49	42	48	54	49	40	40	54	46.3	
Paterson.....	Maximum ...	70	60	90	80	79	78	76	66	64	84	82	67	64	57	73	78	72	68	69	65	61	67	62	64	57	64	72	84	74	48	74	70.0	
	Minimum	48	50	60	60	63	69	53	38	37	60	67	47	38	43	52	58	58	40	39	41	48	56	43	52	44	51	55	59	43	41	48	50.0	
Plainfield.....	Maximum ...	65	63	86	73	78	75	75	59	68	80	82	66	60	59	69	77	72	62	68	58	62	63	59	58	58	62	69	83	58	52	74	67.5	
	Minimum	47	50	61	60	61	67	48	33	34	59	63	44	33	40	51	56	53	38	36	47	46	47	41	48	46	47	54	57	41	42	51	48.4	
Soldiers Home.....	Maximum ...	64	63	90	76	79	81	74	62	66	82	76	56	62	56	72	80	68	62	68	56	63	62	64	66	60	64	68	84	60	57	76	68.3	
	Minimum	52	52	62	60	64	67	46	39	39	60	55	45	35	46	55	63	52	44	41	42	42	52	44	52	45	57							



Scale of Shades.

0 to 1 inch.
1 to 2 inches.
2 to 4 inches.
4 to 6 inches.
Over 6 inches.

Based on 850 records.

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U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU

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CLIMATOLOGICAL DATA

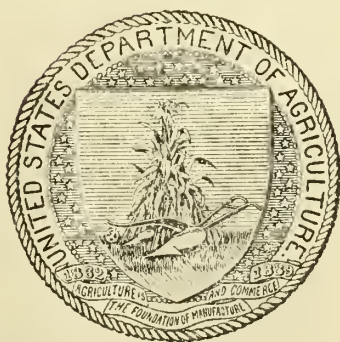
NEW JERSEY SECTION

NOVEMBER, 1919.

BY

G. HAROLD NOYES

METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
DECEMBER 20, 1919.

Departure of the Mean Temperature from the Normal, November, 1919.



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

VOL. XXIV. TRENTON, N. J., NOVEMBER, 1919. No. 11.

GENERAL SUMMARY.

The month showed but little variation from previous Novembers, excepting for the unusual lateness of the first killing frosts of Autumn which, generally occurring in October, did not form in southern counties until the 7th and 9th and in extreme southern Cape May County until the 21st. Temperature, precipitation, sunshine, and wind movement were slightly above the average. The temperature was somewhat deficient in the Highlands and the Kittatinny Valley, but the excess in the remainder of the State was nearly one degree, giving the entire State an average of 0.7° above normal. The warmest portion comprised, as usual, the southern counties, where the mean temperature was two degrees above the normal. The maxima occurred at every station on the 1st, while the minima were generally on the 16th and 21st; these readings were well within the extremes of other years. Values decidedly above the normal were recorded on the 1st, 12th, and during the last decade, and the readings were normal or below during the remainder of the month. Precipitation was somewhat deficient in the Southern Interior, but in excess of normal elsewhere. The wettest portion of the State was the Highlands and the Kittatinny Valley, where the rainfall was nearly two inches above normal. The principal rainy days were the 1st, 2d, 4th, 5th, 11th-13th, 25th, 26th, 29th and 30th. Snow flurries occurred in Sussex County on the 5th, and in the greater portion of the State on the 19th. However, the amounts were too small to measure. There was ample sunshine, particularly during the period from the 13th to 24th. Digging of late potatoes continued practically throughout the month in southern counties, with fair yield. Some truck was still producing during the first week. Fall seeding was completed during the second week. Abnormally high tides did considerable damage to meadow banks during the latter part of the first week.

The temperature departure from the normal for the year 1919 to date, by sections, is: The Highlands, $+1.3^{\circ}$; Red Sandstone Plain, $+1.6^{\circ}$; Southern Interior, $+1.8^{\circ}$. The precipitation accumulated departure from the normal for the year 1919 to date, by sections, is: The Highlands, $+6.45$; Red Sandstone Plain, $+6.37$; Southern Interior, $+4.89$; Seacoast, $+9.03$.

Storm warnings were displayed along the coast on the 18th, 19th, 22d, 29th and 30th. S. S. S.

TEMPERATURE.

The mean monthly temperature of the State, as deduced from observations of 41 stations was 43.7° , which was 0.7° above the normal. The highest temperature was 76° at Tuckerton and Vineland on the 1st, and the lowest, 10° at Culvers Lake on the 21st. The greatest daily range of temperature was 42° at Indian Mills on the 10th. The highest monthly mean was 47.8° at Atlantic City, and the lowest, 39.0° at Newton.

PRECIPITATION.

The mean total rainfall of the State, as deduced from observations of 48 stations, was 3.74 inches, which was 0.35 inch above normal. The greatest monthly rainfall was 6.18 inches at Culvers Lake, and the least, 1.98 inches at Vineland. The greatest amount of rain in any 24 consecutive hours was 1.92 inches at Tuckerton on the 2d. The mean of the number of days on which 0.01 inch or more of rain fell was 11, or 3 more

than normal. There was a trace of snow, which was 1.7 inches less than normal.

WIND.

The prevailing direction was from the northwest, which was normal. The wind movement was approximately 13 miles per hour, or somewhat above normal. The highest velocity, sustained for 5 consecutive minutes, was 69 miles per hour from the west at Long Branch on the 30th.

SUNSHINE AND CLOUDINESS.

The average number of clear days throughout the State was 13, which was 1 more than normal; partly cloudy days, 7, or 2 less than normal; cloudy, 10, or 1 more than normal. The approximate percent. of possible sunshine was 60, and was probably near normal.

MISCELLANEOUS.

Atmospheric pressure, reduced to sea level, averaged 30.11 inches, which was 0.01 inch above normal. The highest reading was 30.66 inches at Atlantic City on the 21st, and the lowest, 29.45 inches at Sandy Hook on the 30th.

The mean stage of the Delaware River at Phillipsburg was 4.8 feet. At Trenton the mean daily stage was 3.3 feet, which was 1.6 feet above normal. The highest stage was 5.7 feet on the 28th, and the lowest, 1.7 feet on the 1st.

The first killing frosts of autumn occurred in the southern portion of the Highlands on the 3d and 7th, in the Red Sandstone Plain on the 9th and 10th, the Southern Interior on the 7th and 9th, and at protected places along the Coast as late as the 21st. Fog occurred on the 1st, 13th, 17th, 18th, 21st, 25th, 26th, 28th and 29th. Thunderstorms occurred in some portions of the State on the 1st, 2d, 4th, 5th and 19th. Sleet was observed in Sussex County on the 13th and in Morris County on the 23d. Solar halos were observed on the 7th, 16th 22d and 25th and the lunar halo on the 10th. Haze occurred on the 16th. Some hail fell at Indian Mills on the 5th.

COMPARATIVE DATA FOR NOVEMBER.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more prec.
1885.....	44.8	76	18	4.53	7.90	2.72	.....	.....	.....	.....
1886.....	44.5	73	17	4.49	6.24	3.45	.....	.....	.....	.....
1887.....	41.5	72	13	1.94	2.60	0.95	.....	.....	.....	.....
1888.....	45.8	77	8	3.97	5.41	2.66	.....	.....	.....	13
1889.....	45.7	69	13	8.48	11.45	4.70	.....	.....	.....	13
1890.....	43.8	74	11	0.82	1.10	0.38	13	12	5	8
1891.....	42.2	70	6	2.39	3.47	1.54	12	10	8	4
1892.....	41.9	71	12	7.29	9.49	4.74	8	9	13	11
1893.....	41.8	70	11	3.48	4.53	2.19	10	11	9	7
1894.....	40.3	76	11	3.34	5.12	1.77	13	7	10	10
1895.....	45.7	80	12	3.17	5.10	1.56	12	7	11	10
1896.....	48.2	78	12	3.05	5.68	1.37	9	9	12	8
1897.....	43.8	74	10	4.59	5.95	2.42	8	11	11	12
1898.....	42.4	70	11	6.76	9.07	3.83	10	9	11	14
1899.....	44.0	71	17	2.29	4.32	0.72	15	8	7	7
1900.....	47.5	79	15	3.43	5.54	1.82	9	10	11	9
1901.....	38.5	69	10	2.38	4.23	1.18	12	9	9	6
1902.....	49.3	80	20	2.20	4.17	0.87	10	11	9	8
1903.....	39.9	79	3	1.26	2.03	0.75	16	8	6	6
1904.....	40.2	69	6	2.18	3.40	1.30	12	10	8	6
1905.....	42.1	70	6	1.84	2.86	0.54	12	10	8	6
1906.....	43.6	70	8	1.61	2.52	1.06	16	7	7	6
1907.....	43.5	68	13	5.65	6.95	4.19	10	8	12	13
1908.....	43.1	72	2	0.96	1.29	0.35	14	8	8	4
1909.....	46.4	80	17	2.36	4.33	1.32	13	8	9	8
1910.....	40.4	71	12	3.79	5.73	1.63	5	13	12	9
1911.....	41.3	73	13	5.17	6.50	3.17	8	11	11	10
1912.....	45.3	76	11	3.43	8.12	2.02	15	8	7	6
1913.....	46.2	77	19	2.71	4.89	1.00	14	7	9	7
1914.....	43.3	80	6	2.60	4.81	1.21	16	8	6	6
1915.....	44.0	75	16	1.69	3.11	0.96	14	8	8	8
1916.....	43.3	75	11	2.11	3.81	0.80	16	5	9	8
1917.....	39.8	68	2	0.56	1.15	0.18	19	5	6	3
1918.....	43.9	71	10	1.87	3.05	0.49	14	6	10	7
1919.....	43.7	76	10	3.74	6.18	1.98	13	7	10	11

Climatological data for November, 1919.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation 0.1 in. or more.	Clear.	Pt. cloudy.			Cloudy.
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	28	40.4 ^b	-0.8	68	1	18	21	34	5.54	+2.05	1.00	0	12	16	4	10	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	27	39.6 ^a	-0.9	68	1	13	16	33	4.40	+0.67	1.27	T.	8	15	12	3	nw.	George S. Briggs.
Culvers Lake†.....	Sussex.....	848	18	.....	.....	.....	.....	.....	.....	.....	6.18	+3.36	1.15	T.	13	11	12	7	e.	Brice E. Riker.
Dover.....	Morris.....	600	35	39.6	-0.7	.....	.....	18	16	32	4.50	+0.87	1.24	0	12	6	14	10	.....	William C. Harris.
Layton.....	Sussex.....	480	19	39.6	+1.2	68	1	14	21	37	5.19	+2.11	1.05	T.	15	12	6	12	sw.	A. M. Depue.
Newton.....	Sussex.....	769	38	39.0	-0.8	66	1	19	21	32	5.36	+2.42	1.05	T.	12	7	9	14	sw.	Irving G. Kern.
Phillipsburg.....	Warren.....	363	37	41.1	-0.5	68	1	21	21	31	4.95	+1.67	1.09	T.	13	14	6	10	ne.	D. Wilson Smith.
Sussex.....	Sussex.....	442	28	40.4 ^a	-0.1	63	1	21	16	36	5.88	+2.82	0.95	T.	11	12	11	7	nw.	Rev. W. August George.
Means and extremes...				39.9	-0.4	68	1	10	21	37	5.25	+1.88	1.27	T.	12	12	9	9	nw.	
<i>The Red Sandstone Plain.</i>																				
Bergen Point††.....	Hudson.....	37	22	43.8 ^a	+0.8	72	1	22	21	32	3.96	+0.38	1.10	T.	9	10	12	8	nw.	William H. Mitchell.
Boonton.....	Morris.....	400	29	40.8	.....	70	1	18	16	37	4.17	+0.50	0.80	T.	10	22	2	6	nw.	J. W. Demmers.
Chatham.....	Morris.....	330	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	George Shields.
Elizabeth.....	Union.....	45	40	43.8	+0.2	73	1	22	16†	31	3.44	+0.10	0.76	0	11	14	5	11	nw.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	31	44.2	-1.4	70	1	22	16†	33	4.02	+0.67	0.99	0	12	18	4	8	w.	Hiram E. Deats.
Highwood.....	Bergen.....	90	30	42.3	0.0	70	1	20	16	31	3.43	-0.20	0.72	0	10	11	7	12	nw.	Charles J. Bates.
Jersey City.....	Hudson.....	10	20	45.6	+2.0	73	1	26	20	24	3.52	+0.12	0.70	T.	9	11	9	10	s.	S. K. Pearson, Jr.
Kearny.....	Hudson.....	.....	.....	44.2	.....	72	1	25	20	30	4.36	.....	1.25	T.	10	8	11	11	n.	Thomas R. Hunt.
Lambertville.....	Hunterdon.....	80	32	43.4	+0.4	69	1	20	16†	31	3.16	-0.45	.....	T.	12	14	6	10	sw.	Montclair Water Co.
Little Falls.....	Passaic.....	180	16	43.7	.....	74	1	25	15	32	3.82	+0.30	0.75	T.	11	15	5	10	w.	Prof. William Wiener.
Newark.....	Essex.....	159	77	44.8	+1.9	71	1	25	20	29	3.68	+0.18	0.80	0	11	18	7	5	nw.	N. J. Experiment Station.
New Brunswick.....	Middlesex.....	110	66	44.4	+0.8	71	1	22	16†	30	3.72	+0.13	0.87	T.	10	16	3	11	nw.	Hackensack Water Co.
New Milford.....	Bergen.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.58	.....	0.69	0	11	.....	.....	.....	.....	George P. Kirsten.
Paterson.....	Passaic.....	80	48	45.0	+1.7	72	1	25	21	29	2.56	-0.70	0.56	T.	11	8	3	19	nw.	Marion T. Probert.
Plainfield.....	Union.....	100	32	43.0	+1.0	72	1	19	16	33	3.86	+0.27	0.77	T.	11	14	7	9	nw.	John C. Sutphen.
Pompton Plains.....	Morris.....	195	17	.....	.....	.....	.....	.....	.....	.....	4.10	+0.61	0.80	0	10	.....	.....	.....	.....	M. S. Taylor.
Ridgefield.....	Bergen.....	80	4	42.4	.....	71	1	20	16	33	3.39	.....	0.71	T.	14	13	4	13	nw.	Wm. J. Chandler, M. D.
Somerville.....	Somerset.....	60	37	44.8	+2.8	72	1	20	21	34	4.22	+0.83	0.85	T.	12	16	5	9	nw.	Peter V. D. Hardcastle.
South Orange.....	Essex.....	200	49	42.6	+1.0	71	1	23	21	28	4.62	+1.25	1.20	T.	10	14	9	7	nw.	Wm. H. Meeder.
Woodcliffe Lake.....	Bergen.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2.94	.....	1.14	0	9	.....	.....	.....	.....	Hackensack Water Co.
New York, N. Y.....		365	49	44.4	+0.4	70	1	26	20	30	3.33	-0.11	0.69	T.	13	7	9	14	nw.	U. S. Weather Bureau.
Means and extremes...				43.7	+0.9	74	1	18	16	37	3.71	+0.27	1.25	T.	11	14	6	10	nw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	38	46.6	+1.7	75	1	23	21	35	3.28	+0.02	1.10	0	12	17	2	11	nw.	Henry A. Jorden.
Burlington.....	Burlington.....	12	33	45.2	+1.2	73	1	22	21	31	3.61	-0.13	0.76	0	11	21	2	7	nw.	D. S. B. McCoy.
Camp Dix.....	Burlington.....	.....	.....	44.0	.....	72	1	19	21	37	2.88	.....	0.61	0	11	6	7	17	nw.	U. S. Army.
Clayton.....	Gloucester.....	126	27	45.0	+1.6	72	1	20	21	38	2.62	-0.91	0.83	T.	8	8	9	13	n.	Marvin Porch.
Hammonton.....	Atlantic.....	103	17	.....	.....	.....	.....	.....	.....	.....	3.16	-0.56	1.08	0	8	17	9	4	s.	G. H. Parkhurst.
Hightstown.....	Mercer.....	120	26	43.6 ^a	0.0	70	1	20	21	32	3.75	+0.09	0.82	0	8	11	10	9	nw.	Rev. W. A. Staunton.
Inlaystown.....	Monmouth.....	185	30	43.8	-0.5	73	1	19	16	35	3.33	-0.33	0.96	0	15	15	6	9	sw.	Wm. R. Hendrickson.
Indian Mills.....	Burlington.....	76	30	45.0	+1.6	74	1	15	16†	42	3.26	-0.34	0.82	0	10	11	5	14	nw.	James M. Armstrong.
Lakewood.....	Ocean.....	54	16	43.8	+0.6	72	1	18	16†	32	3.31	-0.34	1.10	T.	11	12	2	16	nw.	R. W. Holman.
Moorestown.....	Burlington.....	75	57	44.7	+1.7	71	1	26	20	31	2.68	-0.74	0.60	T.	10	.....	.....	.....	.....	David S. Haines.
Northfield.....	Atlantic.....	25	12	.....	.....	.....	.....	.....	.....	.....	2.94	-0.36	1.12	0	9	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	21	.....	.....	.....	.....	.....	.....	.....	3.28	-0.08	1.23	0	11	16	4	10	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	48	43.8	-0.6	70	1	25	21	29	3.10	-0.33	0.76	T.	11	9	7	14	n.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	26	45.2 ^a	+1.2	76	1	17	21	38	3.83	+0.37	1.92	0	8	13	9	8	sw.	Frank R. Austin.
Vineland.....	Cumberland.....	109	51	46.6	+2.7	76	1	22	21	32	1.98	-1.32	0.55	T.	8	14	8	8	nw.	H. C. Himes.
Woodbine.....	Cape May.....	43	28	45.6	+1.6	75	1	15	21	36	2.32	-0.83	1.02	0	9	12	3	15	s.	Jos. H. Cohen.
Philadelphia, Pa.....		117	49	46.8	+1.9	72	1	29	20	26	2.80	-0.26	0.66	T.	11	9	9	12	nw.	U. S. Weather Bureau.
Means and extremes...				44.8	+1.1	76	1	15	21	42	3.08	-0.38	1.92	T.	10	13	6	11	nw.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	30	46.2 ^b	+2.0	72	1	25	21	27	4.15	+0.88	1.18	T.	9	19	4	7	w.	Miss Dorothy A. Alexander.
Atlantic City.....	Atlantic.....	16	46	47.2	+1.7	74	1	28	20	28	3.27	+0.04	1.44	0	11	13	5	12	nw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	35	47.8	+0.4	72	1	29	21	23	2.80	-0.42	1.49	0	10	11	5	14	nw.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	12	43.4	-0.9	67	1	24	21	28	4.54	+1.14	0.98	T.	11	.....	.....	.....	.....	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	29	31	45.2	+1.2	75	1	24	21	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Weather Bureau.
Means and extremes...				.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
For the State.....				.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	

† On other dates also.

The departures from normal temperature determining section or division means.

Reference letters, ^a, ^b, etc., appearing in

T, precipitation is less than 0.01 inch rain

†† Post-office address as follows.—Culver

The station of Kearny should be Soldiers Home. The station of Ridgefield should be Palisades Park, but will hereafter be known as Ridgefield. The name of Wm. J. Chandler should be removed as observer at Ridgefield and placed opposite Kearny, and the names from T. R. Hunt down should be dropped one line, to G. P. Kirsten which should be opposite Ridgefield. Page 86, data attributed to Paterson should be Palisades Park, to Plainfield should be Paterson and to Ridgefield should be Plainfield.

complete reports are used in

ff Lake are Hackensack.

Daily precipitation for November, 1919.

Stations.	Watershed.	Day of month.																															Total.	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>The Highlands and Kittatinny Valley.</i>																																		
Belvidere.....	Delaware.....	.44	.20	....	.04	.86	.....	.....	.....	.....	.....	.32	.36	1.00	.....	.....	.....	.....	.....	T.	.....	.....	.....	.....	.....	.21	.90	.33	.....	.05	.83	.....	5.54	
Charlotteburg.....	Passaic.....	.36	.....	.....	.82	.....	.....	.....	.....	.....	.....	.....	*	1.13	.....	.....	.....	.....	.....	T.	.....	.....	.....	.....	.....	* 1.27	.....	.....	.82	.....	.83	.....	4.47	
Culvers Lake.....	Delaware.....	.23	1.15	T.	.13	1.11	.....	.....	.....	.....	.....	.17	.22	.97	.....	.....	.....	.....	.....	T.	.....	.....	.....	.01	.....	.02	.96	.60	.....	.05	.56	.....	6.18	
Dover.....	Passaic.....	.65	.....	*	.02	.80	.....	.....	.....	.....	.....	*	.88	.24	.....	.....	.....	.....	.....	T.	.....	.....	.....	.02	.....	*	.53	.71	.....	.15	.....	.....	4.50	
Layton.....	Delaware.....	.14	.81	.03	.04	.81	.....	.....	.....	.....	.....	.20	.31	.70	.....	.....	.....	.....	.....	.04	.....	.....	T.	T.	.04	.02	1.05	.56	.....	.10	.31	.....	5.19	
Newton.....	Delaware.....	.10	.73	T.	.06	.95	.....	.....	.....	.....	.....	.22	.23	.88	.....	.....	.....	.....	.....	T.	.02	1.05	.....	T.	.02	.96	.48	.....	.10	.54	.....	6.96		
Phillipsburg.....	do.....	.45	.18	T.	.78	.02	.....	.....	.....	.....	.....	.28	1.09	.48	.....	.....	.....	.....	.....	T.	.....	.....	.....	.01	.02	.22	.91	T.	.34	.17	.....	4.95		
Sussex.....	Hudson.....	.03	.95	.50	.....	.89	.....	.....	.....	.....	.....	.15	.25	.90	.....	.....	.....	.....	.....	T.	.....	.....	.....	.....	.....	.90	.60	.....	.04	.67	.....	5.88		
<i>The Red Sandstone Plain.</i>																																		
Bergen Point.....	Coast.....	1.10	.33	.....	T.	.97	.....	.....	.....	.....	.....	.....	.06	.68	.....	.....	.....	.....	.....	T.	.....	.....	.....	.....	T.	.05	.62	.05	.....	.10	.....	.....	3.96	
Boonton|||.....	Passaic.....	.03	.52	.....	.....	.75	.....	.....	.....	.....	.....	.....	.26	.60	.15	.....	.....	.....	.....	.....	T.	.....	.....	.....	T.	.45	.60	.....	.01	.80	.....	.....	4.17	
Chatham||.....	do.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	*	.77	.....	.....	.....	.....	.....	.....	
Elizabeth.....	Coast.....	.06	.76	.....	T.	.55	.....	.....	.....	.....	.....	.07	.11	.57	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	*	.77	.....	.....	.....	.....	.....	.....	
Flemington.....	Raritan.....	.09	.78	.....	.03	.60	.....	.....	.....	.....	.....	.16	.22	.99	.....	.....	.....	.....	.....	.....	.....	.....	.....	.02	T.	.53	.06	.....	.04	.50	.....	.....	.....	
Highwood.....	Hackensack.....	.25	.31	.....	T.	.72	.....	.....	.....	.....	.....	.03	.05	.71	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	T.	.61	.09	.....	.12	.54	.....	.....	.....	
Jersey City**.....	Coast.....	.58	.19	.....	.....	.68	.....	.....	.....	.....	.....	.04	.05	.59	.....	.....	.....	.....	.....	T.	.....	.....	.....	.....	T.	.70	.....	.....	.10	.59	.....	.....	.....	
Kearny.....	Coast.....	* .90	T.	.....	1.25	.....	.....	.....	.....	.....	.....	.06	.06	.57	.....	.....	.....	.....	.....	T.	.....	.....	.....	.....	T.	.50	.....	.....	.25	.40	.....	.....	.....	
Lambertville.....	Delaware.....	* 1.05	.....	*	*	.....	.....	.....	.....	.....	.....	*	*	1.14	.....	.....	.....	.....	.....	T.	.....	.....	.....	.....	*	*	.51	.....	*	.46	.....	.....	.....	
Little Falls.||||.....	Passaic.....	.05	.56	.....	.75	.....	.....	.....	.....	.....	.....	.14	.52	.15	.....	.....	.....	.....	.....	T.	.....	.....	.....	.05	.....	.43	.47	.....	.10	.60	.....	.....	.....	
Newark**.....	Coast.....	.80	.04	.....	.26	.43	.....	.....	.....	.....	.....	.06	.43	.20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	T.	.25	.63	T.	T.	.24	.34	.....	.....	
New Brunswick.....	Raritan.....	.13	.87	.....	.56	.....	.....	.....	.....	.....	.....	.12	.13	.60	.....	.....	.....	.....	.....	.....	.....	.....	.....	T.	T.	.56	.08	.....	.09	.58	.....	.....	.....	
New Milford.....	Hackensack.....	.32	.22	.....	.35	.36	.....	.....	.....	.....	.....	.04	.15	.55	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.08	.69	.....	.....	.26	.56	.....	.....	
Naterson.....	Passaic.....	.24	.31	.....	.56	.....	.....	.....	.....	.....	.....	.02	.11	.50	.....	.....	.....	.....	.....	.....	.....	.....	.....	T.	.....	.02	.45	.....	.02	.10	.23	.....	.....	
Plainfield.....	Raritan.....	.11	.66	.....	T.	.65	.....	.....	.....	.....	.....	.16	.13	.70	.....	.....	.....	.....	.....	T.	.....	.....	.....	T.	.....	.02	.77	.05	.....	.35	.26	.....	.....	
Pompton Plains||.....	Passaic.....	.06	.62	.....	.66	.....	.....	.....	.....	.....	.....	.....	.18	.63	.12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.39	.58	.....	.06	.80	.....	.....	.....	
Ridgefield.....	Hackensack.....	.04	.61	T.	*	.71	.....	.....	.....	.....	.....	*	.12	.60	.....	.....	.....	.....	.....	T.	.....	.....	.....	.01	T.	*	.65	.15	*	.08	.42	.....	.....	
Somerville.....	Raritan.....	.05	.85	.....	T.	.85	.....	.....	.....	.....	.....	.15	.12	.75	.....	.....	.....	.....	.....	T.	.....	.....	.....	.01	.....	.02	.65	.10	.....	.02	.65	.....	.....	
South Orange.....	Rahway.....	.88	.....	T	T.	1.20	.....	.....	.....	.....	.....	.12	.14	.56	.....	.....	.....	.....	.....	T.	.....	.....	.....	T.	.....	.04	.88	.18	.....	.32	.30	.....	.....	
Woodcliff Lake.....	Hackensack.....	.15	.....	.....	.20	.36	.....	.....	.....	.....	.....	.08	.21	.42	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.10	.01	.14	.....	.28	.....	.....	.....	
New York, N. Y***.....	Coast.....	.50	.09	.....	.30	.31	.....	.....	.....	.....	.....	.03	.12	.64	.....	.....	.....	.....	.....	T.	.....	.....	.....	T.	.....	.06	.64	.01	.01	.11	.51	.....	.....	
<i>The Southern Interior.</i>																																		
Bridgeton.....	Coast.....	.15	1.15	.05	.02	.....	.....	.....	.....	.....	.....	.50	.10	.10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.50	.....	.15	.03	.....	.05	.35	.....	.....	.....	
Burlington.....	Delaware.....	.15	.76	.....	.....	.68	.....	.....	.....	.....	.....	.20	.08	.75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	*	.25	.02	.....	*	.72	.....	.....	
Camp Dix.....	Delaware.....	.55	.14	.....	.45	.04	.....	.....	.....	.....	.....	.17	.13	.61	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.07	.18	.....	.....	.04	.50	.....	.....	
Clayton.....	Maurice.....	.12	.83	.....	.02	.....	.....	.....	.....	.....	.....	.55	.....	.80	.....	.....	.....	.....	.....	T.	.....	.....	.....	.....	.11	.12	.....	.....	.....	.07	.....	.....	.....	
Hammonton.....	Mullica.....	1.08	.....	.....	T.	.44	.....	.....	.....	.....	.....	.21	.....	.64	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.19	*	.14	T.	.....	.46	.....	.....	.....	
Hightstown.....	Raritan.....	.30	.82	.....	.....	.64	.....	.....	.....	.....	.....	.20	.....	.71	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.40	.....	.....	.07	.61	.....	.....	
Imlaystown.....	Delaware.....	.08	.96	.01	.01	.56	.01	.....	.....	.....	.....	.12	.08	.68	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.01	.29	.02	.....	.05	.44	.....	.....	
Indian Mills.....	Mullica.....	.09	.73	.....	T.	.72	.....	.....	.....	.....	.....	.13	.08	.60	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.12	.13	.....	.....	.02	.64	.....	.....	
Lakewood.....	Metedeconk.....	.12	.70	T.	T.	.45	.....	.....	.....	.....	.....	.10	.10	1.10	.....	.....	.....	.....	.....	T.	.....	.....	.....	.....	.04	T.	.20	.03	.....	.05	.42	.....	.....	
Moorestown.....	Delaware.....	.12	.48	.....	T.	.45	.....	.....	.....	.....	.....	.17	.07	.60	.....	.....	.....	.....	.....	T.	.....	.....	.....	.....	.05	.20	.....	.....	.02	.52	.....	.....	.....	
Northfield.....	Coast.....	* 1.12	T.	.....	.42	.....	.....	.....	.....	.....	.....	.10	.....	.35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.37	.19	.01	.....	.....	.38	.....	.....	.....	
Pleasantville.....	Coast.....	.04	1.23	.01	.....	.42	.....	.....	.....	.....	.....	.08	.....	.42	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.37	.01	.12	.16	.....	T.	.42	.....	.....	
Trenton***.....	Delaware.....	.68	.08	T.	.....	.50	.....	.....	.....	.....	.....	.18	.17	.54	.....	.....	.....	.....	.....	T.	.....	.....	.....	.....	.....	.04	.28	.....	.....	.14	.47	.....	.....	
Tuckerton.....	Coast.....	.12	1.92	.02	.....	.50	.....	.....	.....	.....	.....	.04	.....	.54	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.23	.....	.....	.....	.....	.46	.....	.....	
Vineland.....	Maurice.....	.15	.....	.....	.....	.39	.....	.....	.....	.....	.....	.16	.09	.55	.....	.....	.....	.....	.....	T.	.....	.....	.....	.....	.....	.42	.17	.....	.....	.05	.....	.....	.....	
Woodbine.....	Coast.....	.....	1.02	.....	.....	.38	.....	.....	.....	.....	.....	.14	.02	.24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	*	.18	.03	.....	.....	.31	.....	.....	
Philadelphia, Pa.....	Delaware.....	.55	.12	.....	.45	T.	.....	.....	.....	.....	.....	.20	.24	.42	.....	.....	.....	.....	.....	T.	.....	.....	.....	.....	.02	.04	.16	.....	.....	.21	.39	.....	.....	
<i>The Sea Coast.</i>																																		
Asbury Park.....	Coast.....	1.18	.....	.....	.....	.58	.....	.....	.....	.....	.....	.21	.....	1.03	.....	.....	.....	.....	.....	T.	.....	.....	.....	.....	.....	*	.35	.....	.....	.80	.....	.....	.....	
Atlantic City**.....	do.....	1.16	.28	T.	.13	.17	.....	.....	.....	.....	.....	.07	T.	.27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.04	.44	.05	.23	.....	T.	.43	.....	
Cape May City.....	do.....	.01	1.48	.....	T.	.40	.....	.....	.....	.....	.....	.15	.03	.18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	T.	.31	.....	.04	.01	T.	.19	.....	.....	
Long Branch.....	do.....	.70	.63		.40	.30						.09	.03	.86						T.							.10	.30	.23	.10	.34	.46		
Sandy Hook***.....	do.....	.73	.05		.17	.27						.08	.20	.77											T.		.04	.29		.01	.04	.33		

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded.

|| Precipitation measured in the morning: amount then recorded is for the preceding 24 hours. § Incomplete or missing.

* Precipitation included in the next following measurement. **Precipitation for 24-hour period from midnight to midnight. T, Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.				Moisture.		Sun- shine
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, per cent. at 3 a. m.	Relative humidity, per cent. at 3 p. m.	Percentage of possible sunshine.
							Miles per hour.	Direction.	Date.			
Atlantic City	30.12	30.66	21	29.46	2	8.1	27	s.	30	76	72	51
Cape May City	30.15	30.64	21	29.61	30	10.5	36	nw.	5	76	72	51
Long Branch							69	w.	30	76	72	51
Newark							30	nw.	18	67	62	78
New York, N. Y.	30.09	30.59	21	29.48	30	19.8	61	nw.	6	72	68	48
Philadelphia, Pa.	30.13	30.64	21	29.51	2	10.6	34	nw.	5	76	68	46
Ridgefield	30.09	30.60	21	29.49	30							
Sandy Hook	30.10	30.61	21	29.45	30	19.0	64	nw.	5	84	78	63
Trenton	30.10	30.61	20	29.48	2	12.1	45	sw.	30	82	74	58

§ Two directions and dates

* 7 a. m. † 9 p. m.

Daily temperatures for November, 1919.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.	
<i>The Highlands and Kittatinny Valley</i>																																	
Belvidere.....	Maximum ...	68	60	49	51	48	48	45	51	49	58	53	58	....	45	45	48	48	58	48	35	51	50	49	45	46	47	51	48	47	43	....	49.7 ^a
	Minimum ...	44	44	30	....	35	37	28	33	27	25	38	48	....	25	26	20	24	....	25	24	18	34	33	26	23	43	....	32	32	31	....	31.0 ^a
Charlotteburg.....	Maximum ...	68	61	55	45	44	45	42	43	48	50	50	56	52	44	36	46	52	54	42	38	48	50	....	44	46	48	44	40	45	50	....	47.8 ^a
	Minimum ...	61	35	28	38	35	35	29	33	27	19	30	46	36	24	29	13	23	34	29	21	....	30	....	29	21	40	34	26	30	44	....	31.4 ^a
Dover.....	Maximum ...	....	59	45	48	47	47	45	47	51	54	50	57	55	43	43	47	56	51	43	32	50	47	47	47	49	44	45	38	55	59	....	48.3 ^a
	Minimum ...	58	33	29	40	36	32	30	30	27	22	34	48	31	25	22	18	26	32	26	23	18	26	29	23	46	37	32	32	31	....	30.8	
Layton.....	Maximum ...	68	60	47	57	46	48	44	53	50	50	60	58	57	45	43	46	55	60	45	32	50	48	50	45	....	46	43	40	48	47	....	49.7 ^a
	Minimum ...	56	37	24	39	34	35	24	30	25	22	33	46	32	20	25	15	21	28	26	22	14	38	32	21	21	39	32	26	30	35	....	29.4
Newton.....	Maximum ...	66	56	45	48	48	45	41	43	45	53	50	56	55	41	41	46	49	56	47	30	50	48	48	43	46	48	44	33	48	57	....	47.5
	Minimum ...	46	38	28	40	38	33	28	26	25	26	38	43	31	23	28	22	31	34	24	20	19	36	31	28	28	36	31	26	28	....	30.5 ^a	
Phillipsburg.....	Maximum ...	68	60	48	50	46	46	44	50	49	55	51	57	57	42	43	49	49	57	40	34	52	48	50	44	48	48	48	38	56	58	....	49.5
	Minimum ...	60	35	31	43	35	33	30	34	28	27	40	49	33	27	26	22	28	30	28	25	21	36	38	31	27	40	32	29	33	31	....	32.7
Sussex.....	Maximum ...	63	62	57	47	47	48	45	50	60	58	59	57	58	46	43	49	51	59	49	32	50	49	49	46	47	47	43	39	48	60	....	50.6
	Minimum ...	35	31	34	35	36	36	28	35	25	22	35	....	31	23	22	21	26	30	29	23	25	38	33	25	26	....	35	28	30	45	....	30.1 ^b
<i>The Red Sandstone Plain.</i>																																	
Bergen Point.....	Maximum ...	76	62	49	54	52	50	47	50	52	55	55	59	58	46	44	52	58	60	48	36	54	53	52	....	52	52	53	42	58	58	....	52.9 ^a
	Minimum ...	62	....	35	45	42	39	36	38	32	31	39	....	35	29	30	26	30	35	31	26	22	36	36	32	32	36	36	30	34	35	....	34.6 ^b
Boonton§§.....	Maximum ...	70	54	47	50	46	49	45	45	53	56	51	60	51	44	42	47	55	59	37	32	57	48	50	46	51	49	47	38	62	56	....	49.9
	Minimum ...	56	47	28	34	39	37	32	35	27	23	30	41	50	27	28	18	25	27	32	20	29	35	29	23	26	38	27	29	35	....	31.7	
Elizabeth.....	Maximum ...	73	64	48	53	51	53	49	50	55	57	53	60	56	47	45	52	58	60	50	36	53	53	48	43	51	51	46	49	30	60	....	52.5
	Minimum ...	64	47	34	44	39	36	33	37	27	26	33	50	40	26	27	22	32	33	26	22	37	34	31	27	47	40	31	35	45	....	35.1	
Flemington.....	Maximum ...	70	65	49	53	52	49	48	51	57	60	57	61	57	45	47	50	56	62	57	37	53	48	53	47	52	52	53	45	48	61	....	53.2
	Minimum ...	63	47	33	45	37	39	33	35	29	27	33	41	37	28	49	22	26	29	32	27	22	35	37	32	25	46	41	30	35	42	....	35.2
Highwood.....	Maximum ...	70	62	48	53	51	48	45	47	49	54	53	59	58	44	42	48	55	58	47	34	52	51	52	48	51	49	37	54	63	....	51.1	
	Minimum ...	60	40	33	41	41	38	32	32	29	23	36	50	34	26	26	20	25	35	31	27	21	37	32	28	26	47	34	30	31	36	....	33.5
Jersey City.....	Maximum ...	73	65	55	54	54	54	47	48	52	57	55	60	58	45	44	49	53	59	54	35	52	51	50	50	52	54	54	42	61	63	....	53.3
	Minimum ...	52	49	37	45	41	40	36	38	32	34	43	51	37	30	33	29	36	39	35	26	28	40	38	37	34	49	39	30	37	39	....	37.8
Kearny.....	Maximum ...	72	61	49	55	51	46	46	50	46	56	55	60	57	44	42	50	56	60	47	33	53	51	52	47	54	52	50	38	60	65	....	51.9
	Minimum ...	61	39	34	41	42	36	36	38	31	31	40	53	34	30	33	26	33	37	30	25	30	39	40	35	34	48	36	31	36	35	....	36.5
Lambertville.....	Maximum ...	69	64	....	56	52	44	49	47	48	51	52	60	59	40	40	41	51	56	43	43	49	48	50	43	51	59	59	42	48	61	....	50.9 ^a
	Minimum ...	62	44	33	36	40	39	40	43	29	25	37	49	37	27	35	20	27	41	32	25	20	43	38	32	27	48	40	35	33	36	....	35.8
Little Falls.....	Maximum ...	74	55	49	52	50	50	46	49	52	54	54	60	53	41	46	49	52	59	43	37	53	52	50	47	56	52	49	39	65	61	....	51.7
	Minimum ...	60	50	34	38	41	40	35	38	32	26	35	42	53	30	33	25	30	32	34	28	26	32	39	33	30	32	39	32	33	38	....	35.7
Newark.....	Maximum ...	71	66	48	52	46	49	45	47	53	60	55	59	56	45	42	52	55	58	45	32	52	49	52	48	54	52	48	40	63	65	....	52.0
	Minimum ...	60	49	35	42	41	35	35	37	32	33	48	53	35	31	32	30	38	34	29	25	26	39	41	37	35	47	39	34	38	36	....	37.5
New Brunswick.....	Maximum ...	71	64	52	54	55	48	47	49	52	56	54	62	59	43	42	52	55	59	41	36	51	51	51	46	54	59	52	45	49	64	....	52.8
	Minimum ...	64	46	36	45	38	39	35	38	30	28	37	50	41	28	29	22	27	35	33	26	22	38	38	33	29	48	40	31	34	41	....	36.1
Paterson.....	Maximum ...	71	61	48	52	50	51	46	49	52	57	53	60	58	45	44	48	55	59	41	36	51	51	51	46	54	59	52	45	49	64	....	51.7
	Minimum ...	61	36	33	42	41	34	31	32	26	24	36	51	32	26	23	20	28	37	28	26	21	38	34	29	29	45	33	30	34	31	....	33.0
Plainfield.....	Maximum ...	72	63	50	52	52	54	48	49	54	56	52	60	57	48	45	58	60	62	50	37	54	54	53	50	52	50	53	44	50	60	....	53.3
	Minimum ...	60	49	33	42	40	40	34	38	31	29	36	50	38	29	31	25	28	34	35	27	25	38	39	22	30	47	39	31	34	49	....	36.6
Ridgefield.....	Maximum ...	72	63	48	52	51	50	47	48	52	57	53	61	56	45	43	50	57	60	50	35	53	52	53	48	54	51	51	39	62	63	....	52.5
	Minimum ...	61	43	33	43	38	37	33	35	28	26	32	49	33	27	27	19	26	31	31	25	20	34	34	33	24	16	37					



Scale of Shades.

0 to 1 inch.
1 to 2 inches.
2 to 4 inches.
4 to 6 inches.
Over 6 inches.

Based on 700 records.

U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU
CHARLES F. MARVIN, CHIEF

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

DECEMBER, 1919.

BY
G. HAROLD NOYES
METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
JANUARY 22, 1920.

Departure of the Mean Temperature from the Normal, December, 1919.



Shaded portions show excess (+).
 Unshaded portions show deficiency (-).
 Lines show amount of excess or deficiency.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Meteorologist.

VOL. XXIV. TRENTON, N. J., DECEMBER, 1919. No. 12.

GENERAL SUMMARY.

The month was abnormally cold in the State, averaging somewhat over 4° below normal; in fact, only in the years 1903, 1904, 1910 and 1917 were there any colder Decembers. The deficiency commenced during the first week and, save for the short periods of the 7th-11th and 13th-14th, continued throughout the month. The most pronounced cold period began during the night of the 13th-14th, when the maxima of the month occurred at nearly all stations, and continued, with the mean daily temperature falling evenly, to the morning of the 18th when the minima of the month, below zero in all but the extreme southern counties, were observed. At many stations it was the earliest zero temperature on record. During the succeeding weeks the temperature recovered somewhat, although it remained below normal. There was a deficiency of almost an inch in the total precipitation in the State. A few stations in the Southern Interior had an excess, but the deficiencies elsewhere ranged from one-half inch to two inches, being most marked in the northern counties. The principal storm of the month was of rain and occurred on the 9th-10th, attending a depression which passed from Ohio to the lower St. Lawrence valley on those days. The snowfall was slightly in excess of normal, and fell throughout the State on the 14th, 17th, 19th, 20th, 24th, 25th, 29th, and 30th. At the close of the month the ground was slightly covered with snow in the northern half, and practically bare in the southern half of the State. There was more cloudiness and consequently less sunshine than usual.

The cold wave brought great quantities of ice down the Delaware River. These large cakes accumulated in shallow places and against bridge and other obstructions, resulting in a gorge some distance below Trenton, and caused the river to freeze over with an extremely jagged surface at Trenton and above. River navigation closed at Trenton with the forming of this gorge on the 18th. Ice harvesting for farm storage commenced during the second decade, and the commercial crop was ready for cutting at the close of the month, when the thickness averaged 8 inches. Grass and winter grain fared well during the month and was in good condition for wintering. Very little farm work was done during the last half of the month.

The temperature departure from normal for the year 1919 to date, by sections, is: The Highlands, +0.8°; Red Sandstone Plain, +1.1°; Southern Interior, +1.4°; Sea Coast, +1.3°. The precipitation accumulated departure from the normal for the year 1919 to date, by sections, is: The Highlands, +4.94; Red Sandstone Plain, +5.25; Southern Interior, +4.65; Sea Coast, +8.38.

Storm warnings were displayed along the coast on the 6th, 9th, 12th, 14th, 15th, 24th, 26th, 29th and 30th. S. S. S.

TEMPERATURE.

The monthly mean temperature of the State as deduced from observations of 41 stations, was 28.8°, which was 4.1° below normal. The highest temperature was 67° at Indian Mills and Lakewood on the 13th, and the lowest, 18° below zero at Culvers Lake on the 18th. The greatest daily range of temperature was 40° at Charlotteburg on the 23d and Long Branch on the 14th. The highest monthly mean was 34.6° at Cape May City, and the lowest, 24.6° at Newton.

PRECIPITATION.

The mean total precipitation of the State, as deduced from observations of 46 stations, was 2.98 inches, which was 0.84 inch

below normal. The greatest monthly precipitation was 5.14 inches at Bridgeton, and the least, 1.84 inches at Boonton. The average total snowfall was 6.8 inches, which was 0.5 inch above normal; this average depth ranged from 9.2 inches in the Highlands to 5.4 inches in the Southern Interior. The greatest precipitation accumulated in any 24 hours was 3.05 inches at Bridgeton on the 10th. The average number of days on which 0.01 inch or more of precipitation fell was 12, or three more than normal.

WIND.

The prevailing wind direction was from the northwest, which was normal. The wind movement was approximately 12 miles per hour, which was probably somewhat below normal. The highest velocity, sustained for 5 consecutive minutes, was 69 miles per hour from the northwest at Long Branch on the 10th.

SUNSHINE AND CLOUDINESS.

The average number of clear days throughout the State was 10, which was 2 less than normal, partly cloudy days, 8, or 1 less than normal; cloudy, 13, or 3 more than normal. The approximate percent. of possible sunshine was 44, and was probably somewhat below normal.

MISCELLANEOUS.

Atmospheric pressure, reduced to sea level, averaged 30.14 inches, which was 0.04 inch above normal. The highest reading was 30.83 inches at Cape May City on the 11th, and the lowest, 29.44 inches at Sandy Hook on the 7th.

The mean stage of the Delaware River at Phillipsburg was 4.1 feet. At Trenton the mean daily stage was 4.9 feet, which was 3.3 feet above normal. The highest stage was 8.2 feet on the 20th and the lowest, 2.6 feet on the 6th.

Dense fog occurred on the 6th, 7th, 9th, 10th, 12th, 13th, 14th, 23d, and 24th. Haze occurred on the 8th. Sleet was observed at a few stations on the 8th and 12th, and quite generally throughout the State on the 14th and 24th. Solar halos were observed on the 11th, 23d and 26th, and a lunar halo on the 31st.

COMPARATIVE DATA FOR DECEMBER.

Year.	Temperature.			Precipitation.			No. of days.			
	Mean.	Highest.	Lowest.	Mean.	Greatest.	Least.	Clear.	Partly cloudy.	Cloudy.	.01 inch or more prec.
1885.....	35.3	60	6	3.15	4.33	2.47	.....	.....	.....	.....
1886.....	29.1	60	-2	3.51	4.65	1.62	.....	.....	.....	.....
1887.....	33.7	62	6	5.29	7.32	3.64	.....	.....	12	10
1888.....	34.9	65	5	3.69	4.95	2.05	.....	.....	8	8
1889.....	41.5	71	8	1.62	3.69	0.25	.....	.....	9	9
1890.....	30.9	56	3	3.89	5.74	2.34	11	10	10	8
1891.....	40.9	71	9	4.25	5.32	2.25	13	9	9	8
1892.....	30.4	68	1	1.87	3.09	1.30	9	11	11	6
1893.....	34.9	70	5	3.39	4.66	1.67	11	10	10	11
1894.....	34.8	66	-3	4.36	6.39	1.64	12	9	10	9
1895.....	37.2	70	3	2.61	5.42	1.71	11	9	11	6
1896.....	31.3	64	-15	1.43	2.70	0.85	14	9	8	4
1897.....	35.1	69	-3	4.90	6.44	3.07	8	11	12	11
1898.....	33.3	66	-2	3.53	4.85	2.38	12	10	9	9
1899.....	35.5	69	-1	2.11	4.30	1.29	14	10	7	7
1900.....	34.4	64	-2	2.59	3.97	1.47	14	10	7	6
1901.....	32.6	68	-8	7.30	9.45	4.87	12	9	10	11
1902.....	31.7	62	-11	7.23	8.99	5.81	13	7	11	13
1903.....	28.6	56	-13	4.08	5.49	3.20	14	9	8	9
1904.....	27.0	60	-15	3.19	5.38	2.06	10	7	14	12
1905.....	36.3	61	5	3.65	5.60	2.58	14	8	9	7
1906.....	33.0	70	-5	3.99	6.18	2.70	9	8	14	13
1907.....	36.6	70	-3	4.91	7.13	3.55	12	8	11	9
1908.....	34.0	72	1	3.63	5.26	2.10	10	8	13	11
1909.....	29.8	60	-15	4.45	5.51	3.55	14	8	9	5
1910.....	26.5	58	-14	2.79	4.60	1.92	11	10	10	9
1911.....	38.4	70	2	3.77	5.09	2.94	10	7	14	11
1912.....	36.9	68	-1	4.73	6.33	3.40	12	9	10	9
1913.....	37.7	63	-11	3.03	4.59	1.47	13	9	9	7
1914.....	31.1	66	-12	5.33	9.12	2.99	10	6	15	12
1915.....	31.9	64	3	4.82	7.83	2.19	12	9	10	8
1916.....	32.3	70	-8	4.61	6.34	3.35	13	8	10	11
1917.....	24.8	54	-29	3.18	5.46	1.55	13	7	11	8
1918.....	37.5	66	6	3.92	4.94	3.21	12	7	12	10
1919.....	28.8	67	-18	2.98	5.14	1.84	10	8	13	12

Climatological data for December, 1919.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahr.						Precipitation, in inches.				No. of days.				Prevailing direction of wind.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Precipitation .01 in. or more.	Clear.	Pt. cloudy.			Cloudy.
<i>The Highlands and Kittatinny Valley.</i>																				
Belvidere.....	Warren.....	289	28	25.8	-5.0	50	7	-7	18	31	2.46	-1.68	0.70	6.5	12	13	5	13	.....	Samuel J. Hixson.
Charlotteburg.....	Passaic.....	719	27	26.0 ^a	-4.6	52	13	-10	19	40	2.29	-2.10	1.00	.....	.....	.....	.....	.....	nw.	George S. Briggs.
Culvers Lake.....	Sussex.....	848	18	.....	.....	.....	.....	-18	18	.....	2.16	-1.37	0.77	9.5	13	9	13	9	e.	Brice E. Riker.
Dover.....	Morris.....	600	35	24.8	-5.3	56	13†	-8	18	37	3.09	-1.03	0.95	12.8	12	2	17	12	.....	William C. Harris.
Layton.....	Sussex.....	480	19	24.8	-2.6	53	14	-11	18	32	2.17	-2.00	0.74	5.0	10	13	5	13	sw.	A. M. Depue.
Newton.....	Sussex.....	769	38	24.6 ^b	-4.7	52	14	-10	18	31	2.36	-1.34	0.72	10.2	15	11	6	14	w.	Irving G. Kern.
Phillipsburg.....	Warren.....	363	37	25.6	-5.7	47	10	-5	18	27	2.67	-1.01	0.63	11.3	14	13	4	14	nw.	D. Wilson Smith.
Sussex.....	Sussex.....	442	28	25.4	-4.4	48	7†	-12	18	37	2.20	-1.54	0.65	.....	11	10	11	10	nw.	Rev. W. August George.
Means and extremes.....				25.3	-4.6	56	13†	-18	18	40	2.42	-1.51	1.00	9.2	12	10	9	12	nw.	
<i>The Red Sandstone Plain.</i>																				
Bergen Point.....	Hudson.....	37	22	28.2 ^b	-4.8	59	13†	-2	18	33	2.87	-1.12	0.72	5.0	13	4	16	11	nw.	William H. Mitchell.
Boonton.....	Morris.....	400	29	24.6	.....	.....	.....	-7	18	37	1.84	-2.26	0.52	5.5	13	20	5	6	nw.	J. W. Demmers.
Chatham.....	Morris.....	330	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	George Shields.
Elizabeth.....	Union.....	45	40	28.6	-4.9	57	13†	-5	18	29	2.85	-0.94	0.68	8.2	13	12	7	12	nw.	L. B. Bonnett.
Flemington.....	Hunterdon.....	140	31	28.3	-3.7	57	14	-7	18	33	3.07	-0.61	0.62	7.0	11	16	3	12	w.	Hiram E. Deats.
Highwood.....	Bergen.....	90	30	26.8	-5.8	58	13	-7	18	29	2.66	-1.50	0.52	11.3	13	7	10	14	nw.	Charles J. Bates.
Jersey City.....	Hudson.....	10	20	30.8	-3.2	59	14	-1	18	27	2.68	-0.88	0.68	8.4	12	10	10	11	sw.	S. K. Pearson, Jr.
Kearny.....	Hudson.....	.....	.....	29.6	.....	60	14	-2	18	38	2.79	.....	.....	6.5	12	5	16	10	nw.	Thomas R. Hunt.
Lambertville.....	Hunterdon.....	80	32	28.1 ^b	-5.2	58	14	-5	18	34	2.86	-0.92	.....	.....	11	11	4	16	n.	Montclair Water Co.
Little Falls.....	Passaic.....	180	16	28.4	.....	58	13	0	18	30	2.74	-1.10	0.68	5.3	10	14	6	11	w.	Prof. William Wiener.
Newark.....	Essex.....	159	77	29.0	-4.0	60	13	0	18	35	3.12	-0.68	0.52	8.5	14	8	15	8	sw.	N. J. Experiment Station.
New Brunswick.....	Middlesex.....	110	66	28.6	-4.5	60	14	-4	18	33	2.67	-1.08	0.71	4.9	10	14	8	9	nw.	Hackensack Water Co.
New Milford.....	Bergen.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2.43	.....	0.54	.....	11	.....	.....	.....	.....	George P. Kirsten.
Paterson.....	Passaic.....	80	48	29.4	-3.7	57	13†	2	18	25	2.09	-2.02	0.46	4.5	12	6	4	21	nw.	Marion T. Probert.
Plainfield.....	Union.....	100	32	27.2	-4.7	57	14	-6	18	31	2.96	-0.93	0.68	8.0	13	7	15	9	nw.	John C. Sutphen.
Pompton Plains.....	Morris.....	195	17	.....	.....	.....	.....	.....	.....	.....	2.41	-1.33	0.52	.....	10	.....	.....	.....	.....	M. S. Taylor
Ridgefield.....	Bergen.....	70	4	26.2	.....	57	14	-6	18	38	2.60	.....	0.93	10.0	12	10	6	15	nw.	George P. Kirsten.
Somerville.....	Somerset.....	60	37	28.4	-3.5	57	14	-4	18	28	2.88	-0.69	0.50	8.5	12	13	4	14	w.	Peter V. D. Hardcastle.
South Orange.....	Essex.....	200	49	27.4	-4.6	58	13†	-3	18	38	3.04	-0.79	0.82	11.5	12	10	10	11	w.	Wm. H. Meeder.
Woodcliff Lake.....	Bergen.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Hackensack Water Co.
New York, N. Y.....		365	49	30.0	-4.4	60	13	0	18	36	2.53	-0.92	1.03	7.9	14	5	9	17	nw.	U. S. Weather Bureau.
Means and extremes.....				28.1	-4.4	60	13†	-7	18	38	2.70	-1.12	0.93	7.5	12	10	9	12	nw.	
<i>The Southern Interior.</i>																				
Bridgeton.....	Cumberland.....	30	38	31.6	-4.0	66	13	2	18	28	5.14	+1.27	3.05	4.5	12	.....	.....	.....	nw.	Henry A. Jorden.
Burlington.....	Burlington.....	12	53	30.4	-3.7	60	13	0	18	30	3.33	-0.58	0.92	6.4	14	15	6	10	nw.	D. S. B. McCoy.
Camp Dix.....	Burlington.....	.....	1	29.4	.....	65	13	-2	18	34	3.76	.....	0.89	.....	13	4	6	21	nw.	U. S. Army.
Clayton.....	Gloucester.....	126	27	29.5 ^b	-4.5	66	13	1	18	38	2.82	-0.87	0.80	4.3	8	15	10	6	nw.	Marvin Porch.
Hammonton.....	Atlantic.....	103	17	.....	.....	.....	.....	.....	.....	.....	3.97	-0.13	1.96	4.5	10	17	9	5	nw.	G. H. Parkhurst.
Hightstown.....	Mercer.....	120	26	28.7	-4.9	57	13	-2	18	27	3.58	-0.13	1.09	5.7	13	18	3	10	nw.	Rev. W. A. Stanton.
Imlaystown.....	Monmouth.....	185	30	29.0	-5.6	61	13	-2	18	36	3.49	-0.08	1.06	5.3	13	17	9	5	sw.	Wm. R. Hendrickson.
Indian Mills.....	Burlington.....	76	30	30.6 ^b	-3.4	67	13	-4	18	39	4.08	-0.01	1.76	6.0	11	.....	.....	.....	nw.	James M. Armstrong.
Lakewood.....	Ocean.....	54	16	30.1	-3.7	67	13	-4	18	34	3.84	+0.12	1.45	7.0	12	8	2	21	sw.	R. W. Holman.
Moorestown.....	Burlington.....	75	57	30.8	-2.5	63	13	0	18	29	3.67	+0.09	1.09	5.5	13	.....	.....	.....	nw.	David S. Haines.
Northfield.....	Atlantic.....	25	12	.....	.....	.....	.....	.....	.....	.....	2.64	-1.16	0.58	4.4	11	.....	.....	.....	.....	William L. Flick.
Pleasantville.....	Atlantic.....	26	21	.....	.....	.....	.....	.....	.....	.....	2.75	-0.92	0.55	.....	13	16	2	13	.....	Lincoln Van Gilder.
Trenton.....	Mercer.....	190	48	28.9	-5.5	59	13	-1	18	35	2.94	-0.22	1.02	4.6	13	7	7	17	n.	U. S. Weather Bureau.
Tuckerton.....	Ocean.....	23	26	31.5 ^a	-3.0	63	7	-1	18	39	3.00	-1.28	0.98	7.8	11	7	10	14	nw	Frank R. Austin.
Vineland.....	Cumberland.....	109	51	31.8	-2.6	66	13	2	18	31	4.35	+0.51	.....	.....	10	.....	.....	.....	nw.	H. C. Himes.
Woodbine.....	Cape May.....	43	28	32.9 ^d	-3.1	65	13	1	21	39	.....	.....	.....	.....	.....	.....	.....	.....	n.	Jos. H. Cohen.
Philadelphia, Pa.....		117	49	32.5	-3.2	61	13	4	18	33	3.33	+0.29	1.01	6.6	14	8	5	18	nw.	U. S. Weather Bureau.
Means and extremes.....				30.4	-3.8	67	13	-4	18	39	3.56	-0.24	3.05	5.5	12	12	7	12	nw.	
<i>The Sea Coast.</i>																				
Asbury Park.....	Monmouth.....	22	30	32.4 ^b	-2.1	66	13	-1	18	30	4.42	+0.78	1.30	5.0	10	14	8	9	w.	Miss Dorothy A. Alexander.
Atlantic City.....	Atlantic.....	16	46	33.7	-2.7	58	10	3	18	33	2.45	-1.29	0.48	3.7	16	8	7	16	nw.	U. S. Weather Bureau.
Cape May City.....	Cape May.....	17	35	34.6	-3.3	60	7	3	18	30	2.17	-1.61	0.50	3.2	12	7	4	20	nw.	U. S. Weather Bureau.
Long Branch.....	Monmouth.....	25	12	29.3	-4.7	64	13	-1	18	40	3.80	+0.10	0.90	8.9	15	2	11	18	nw.	William D. Martin, Jr.
Sandy Hook.....	Monmouth.....	22	21	30.8	-3.8	57	14	3	18	33	2.72	-1.13	1.13	5.1	12	4	13	14	nw.	U. S. Weather Bureau.
Means and extremes.....				32.2	-3.3	66	13	-1	18	40	3.11	-0.65	1.30	5.2	13	7	9	15	nw.	
For the State.....				28.8	-4.1	67	13	-18	18	40	2.97	-0.84	3.05	6.8	12	10	8	13	nw.	

† On other dates also.

§ Length of precipitation record; temperature record is much shorter.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means.

†† Received too late to be included in the means.

Reference letters, a, b, c, etc., appearing in the table indicate number of days missing; for example, b represents 2 days, etc.

T, precipitation is less than 0.01 inch rain or melted snow.

†† Post-office address as follows.—Culvers Lake is Branchville; Bergen Point is Bayonne; Pleasantville is Atlantic City; Milford and Woodcliff Lake are Hackensack.

Daily precipitation for December, 1919.

Stations.	Watershed.	Day of month.																															Total.	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
<i>The Highlands and Kittatinny Valley.</i>																																		
Belvidere.....	Delaware.....						.28	*	.05	*	.70			.52	.38	*	*	.07		.16					*	.07					.23		2.46	
Charlotteburg.....	Passaic.....						*	.53	*	*	1.00			*	*	*	*	.45		T.	T.				.19					.12		2.29		
Culvers Lake.....	Delaware.....						T.	.39	T.	.77	.22		.01	.22	.27	T.	.01	.03		.05	.02	T.			.02	.05				.10		2.16		
Dover.....	Passaic.....						*	.54	*	.95			*	.39	.03	.05	T.	.20		.45					.20					.28		3.09		
Layton.....	Delaware.....							.42	.03	.74	.19			.24	.21	T.		.03		.10	T.	T.			T.	.07				.14		2.17		
Newton.....	Delaware.....						.05	.34	.13	.72	.29		.03	.16	.33	.01	.02	.06		.04					.05	.02				.11		2.36		
Phillipsburg.....	do.....						.50	.03	.11	.63	.35		.07	.20	.26	T.	.05	.10		.12	T.				.11	.02				.12		2.67		
Sussex.....	Hudson.....						.31	.04	.65	.36			.04	.27	.28			.08		.02	.03									.12		2.20		
<i>The Red Sandstone Plain.</i>																																		
Bergen Point.....	Coast.....						.09	.46	.16	.41	.72		.20	.07	.22	T.			.18	.13	.02	T.			.05	.16			*			2.87		
Boonton|||.....	Passaic.....						.42		.21	.52		.03	.01	.33	.03	.02	.06		T.	.03						.07				.10	.01	1.84		
Chatham|||.....	do.....																								*									
Elizabeth.....	Coast.....						.57	*	*	1.14		.20	.03	.39	T.		.08		*	.14					*	.18				.12		2.85		
Flemington.....	Raritan.....						T.	.53	.06	.56	.62		.30	.09	.24		.18	.10		.10					.21				.18		3.07			
Highwood.....	Hackensack.....						.02	.42	.13	.41	.52		.17	.06	.35	T.		.04		.13					.16	.15				.10		2.66		
Jersey City**.....	Coast.....						T.	.50	.05	.40	.68		.23	.02	.25	T.		.05		.15					.14	.12				.09		2.68		
Kearny.....	Coast.....						.55	*	*	1.13		.22	.10	.30	T.		.05	.05		.05					*	.27				.12		2.79		
Lambertville.....	Delaware.....						*	.53	*	*	1.30		*	*	.67		.06		.05		.05				.21					.09		2.86		
Little Falls. ||||.....	Passaic.....						.43		.50	.68		T.	.15	.42	T.	.02	.05		.11						.21	.24			.14	T.	2.74			
Newark**.....	Coast.....						.32	.22	.18	.52	.34	.25	.15	.28	.03	.07	.15	.25							.14				T.	.22		3.12		
New Brunswick.....	Raritan.....						T.	.40	.09	.43	.71		.29	.09	.22				.35							.05				.04		2.67		
New Milford.....	Hackensack.....						.35	.12	.11	.48	.54		.12	.07	.38										.07	.09				.10		2.43		
Paterson.....	Passaic.....						T.	.46	.12	.45	.30		.10	.05	.27	T.	T.	.03		.10					.05	.04			.12		2.09			
Plainfield.....	Raritan.....						.06	.53	.10	.40	.68		.41	.07	.25	T.		.06		.05	T.				.08	.12			.15		2.96			
Pompton Plains|||.....	Passaic.....						.45		.41	.52		T.	.13	.31	T.	.04		T.	.19						.14				.08	.14	2.41			
Ridgefield.....	Hackensack.....						.45	.07	.42	.51		.20	.05	.35	.01	T.	.08		.15		.10				T.	.21			.10		2.60			
Somerville.....	Raritan.....						T.	.50	.05	.44	.70		.25	.20	.25		T.	.07		.05					.12	.10			.15		2.88			
South Orange.....	Rahway.....						.37	.20	.13	.37	T.		.82	.11	.36	T.		.07		.10		T.			*	.31			.20		3.04			
Woodcliff Lake.....	Hackensack.....						.41	.04	.15	.48	.31		.04	.09	.21										.24	.01				.12		\$		
New York, N. Y***.....	Coast.....						.24	.06	.06	.42	.69		.20	.06	.24	T.	.01	.06		.12		T.			.24	.01				.12		2.53		
<i>The Southern Interior.</i>																																		
Bridgeton.....	Coast.....						.48		.28	.05	3.05		.32	.05	.32			.05		.30					.14				.05	.05		5.14		
Burlington.....	Delaware.....						*	.53	.21	.28	.92		.29	.05	.52			.04		.18	.01				.17	.04			T.	.09		3.33		
Camp Dix.....	Delaware.....						.47	.12	.57	.52	.89		.17	.06	.31			.04		.30					.11	.08				.12		3.76		
Clayton.....	Maurice.....						.40	.25	.44	.16		.26	T.	.36								.80			.15				T.	T.		2.82		
Hammonton.....	Mullica.....						.61	.07	.45		1.96		.25		.26			.02		.22					.12				.01	T.		3.97		
Hightstown.....	Raritan.....						.56	.05	.33	1.09		.36	.02	.60		.02		.11	.04						.16	.14			.10		3.58			
Imlaystown.....	Delaware.....						T.	.60	.10	.41	1.06		.24	.04	.50		.01		.10	.06					.12	.15			.10		3.49			
Indian Mills.....	Mullica.....						T.	.50	.33	.22	1.76		.26		.30		.04		.33	.07					.15				T.	.12		4.08		
Lakewood.....	Metedeconk.....						T.	.53	.29	.22	1.45		.20	T.	.39			.05		.30	.07	T.			.14	.10		T.		.10		3.84		
Moorestown.....	Delaware.....						.02	.48	.15	.20	1.09		.20	.25	.50		.25		.25	.05					.15	T.			T.	.08		3.67		
Northfield.....	Coast.....						.09	.58	.30	.05	.50		.38	.01	.48			.01	.20		.33	.01			.12				.01	T.		2.64		
Pleasantville.....	Coast.....						.09	.55	.33	.10	.46		.40	.01	.45		T.		.24	.02					.14	.01			.07	.02		2.75		
Trenton***.....	Delaware.....						.51	.07	.13	.41	.73		.24	.01	.47	T.	T.	.01		.12	T.				.14	.02		T.	.08		2.94			
Tuckerton.....	Coast.....						.51	.47	.15	.54		.13	.11	.48			.07			.32					.12				.10		3.00			
Vineland.....	Maurice.....						*	1.31		1.86		.33		.21			.05	*							.43				.05		4.35			
Woodbine.....	Coast.....						.13	.19	.06	.59				.25																	\$			
Philadelphia, Pa.....	Delaware.....						.44	.07	.21	.45	.72		.24	.03	.51	T.		.03		.29	T.				.12	.02		T.	T.	.02	.18		3.33	
<i>The Sea Coast.</i>																																		
Asbury Park.....	Coast.....						1.20	*	.45	1.08		1.30		.39					.30		T.				*	.10				.10		4.92		
Atlantic City***.....	do.....						.23	.26	.31	.18	.30		.34	.05	.32			.01	.01	.33	.01		T.	T.	.06	.01			.02	.01		2.45		
Cape May City.....	do.....						.04	.46	.22	.04	.22		.50	.02	.18			.02		.35	T.				.06				.06		2.17			
Long Branch**.....	do.....						.37	.07	.17	.90	.76		.34	T.	.37		.01	.02	T.	.37		.09			.01	.13	.10			.09		3.80		
Sandy Hook***.....	do.....						.23	.09	.02	.38	.83		.25	.02	.37	T.	T.	.06	T.	.23		T.			.15					.09		2.72		

Except as otherwise indicated, observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the time of observation. *** Regular Weather Bureau station; precipitation is for 24-hour period, midnight to midnight. † Separate dates of falls not recorded.

||| Precipitation measured in the morning; amount then recorded is for the preceding 24 hours. § Incomplete or missing.

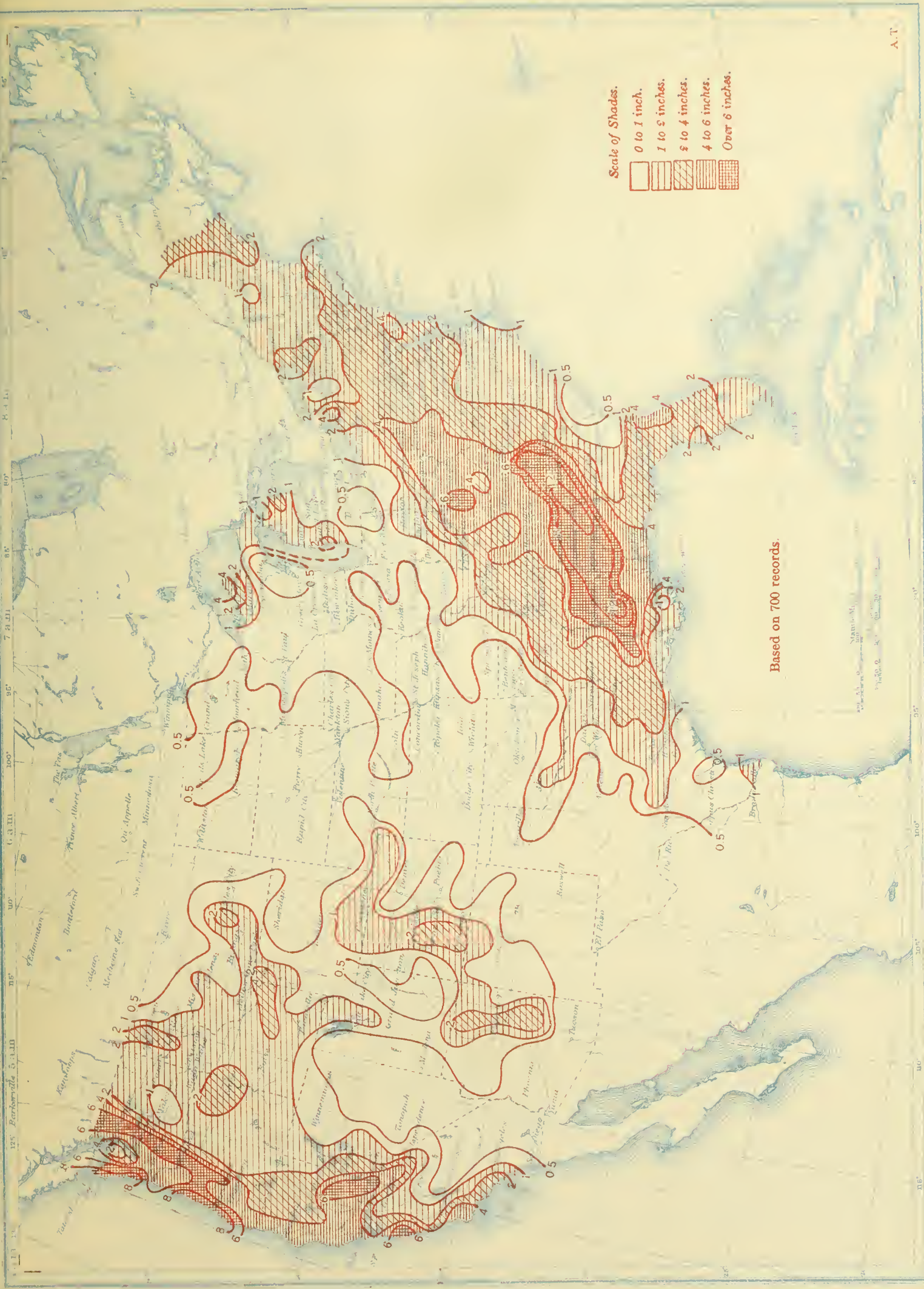
* Precipitation included in the next following measurement. ** Precipitation for 24-hour period from midnight to midnight. T. Trace, or less than 0.01 inch.

MISCELLANEOUS DATA.

Stations.	Pressure.					Wind.			Moisture.		Sun- shine	
	Monthly mean.	Highest.	Date.	Lowest.	Date.	Hourly velocity.	Highest.			Relative humidity, per cent. at 8 a. m.	Relative humidity, per cent. at 8 p. m.	Percentage of possible sunshine
							Miles per hour.	Direction.	Date.			
Atlantic City.....	30.15	30.81	11	29.50	7	8	29	nw.	10	78	74	33
Cape May City.....	30.18	30.83	11	29.56	30	10	42	uw.	10	84	80	.....
Long Branch.....	.....	.....	.....	.....	.....	.....	69	uw.	10	.....	.....	.....
Newark.....	.....	.....	.....	.....	.....	.....	40	nw.	10	74*	70†	54
New York, N. Y.....	30.13	30.77	11	29.47	7	17	72	nw.	10	74	64	41
Philadelphia, Pa.....	30.13	30.83	11	29.46	7	11	37	nw.	10	70	66	34
Ridgefield.....	30.13	30.77	11	29.48	7	.....	.....	.....	.....	.....	.....	.....
Sandy Hook.....	30.13	30.79	11	29.44	7	17	52	nw.	10	82	76	53
Trenton.....	30.13	30.79	11	29.47	30	12	48	nw.	10	81	74	38

Daily temperatures for December, 1919.

Stations.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Mean.		
The Highlands and Kittatinny Valley																																		
Belvidere.....	Maximum	38	43	38	27	31	30	50	46	40	40	31	33	42	34	32	26	20	11	13	33	32	43	42	33	32	31	39	41	28	34	42	34.0	
	Minimum	25	23	17	10	14	21	28	29	35	28	16	22	30	32	15	9	9	-7	0	9	8	18	11	16	18	5	27	27	12	9	26	17.5	
Charlotteburg.....	Maximum	41	40	38	31	29	34	45	43	38	40	35	37	52	48	38	26	15	10	10	27	35	45	45	39	.....	38	36	.....	31	30	37.2 ^a		
	Minimum	26	18	13	3	7	21	28	29	34	25	14	20	34	26	12	4	10	-9	-10	10	15	.....	5	21	8	1	24	25	8	3	23	14.7 ^a	
Dover.....	Maximum	38	41	27	29	30	34	47	40	45	47	28	37	56	46	20	19	11	16	28	26	37	47	31	26	28	38	34	26	31	36	34.0		
	Minimum	26	22	14	9	11	21	31	31	36	19	15	22	37	19	18	8	-2	-8	-10	10	15	.....	5	21	8	1	24	25	8	3	23	14.7 ^a	
Layton.....	Maximum	40	43	33	30	32	34	50	43	41	50	32	35	50	53	32	19	18	14	10	30	34	41	40	35	37	27	38	37	28	32	37	34.7	
	Minimum	26	20	14	4	8	20	26	28	33	25	14	23	33	26	13	4	11	-7	10	13	28	44	45	.....	28	37	35	26	31	37	33.6 ^b		
Newton.....	Maximum	38	41	36	31	32	33	46	42	45	46	28	33	49	52	33	23	18	11	10	13	28	44	45	.....	28	37	35	26	31	37	33.6 ^b		
	Minimum	26	23	15	8	15	23	21	32	32	22	14	21	32	23	18	11	-10	-4	8	28	28	44	45	.....	28	37	35	26	31	37	33.6 ^b		
Phillipsburg.....	Maximum	37	44	29	29	32	35	45	39	44	47	27	36	46	46	25	22	10	13	28	34	37	40	33	26	32	40	36	25	35	39	33.3		
	Minimum	26	25	16	13	17	25	34	32	36	20	17	24	35	20	15	10	-1	-5	0	12	10	20	13	21	12	7	27	19	12	12	27	17.8	
Sussex.....	Maximum	45	42	37	33	31	35	48	45	40	45	32	34	46	48	28	20	14	9	34	33	44	46	35	33	28	39	37	30	32	40	34.9		
	Minimum	27	21	14	10	18	18	29	28	37	26	15	17	33	26	14	9	5	-12	-5	9	9	22	9	25	12	2	21	24	5	5	25	15.9	
The Red Sandstone Pldn.																																		
Bergen Point.....	Maximum	.....	45	32	32	40	48	45	50	50	33	35	59	59	31	24	23	13	21	30	31	38	43	37	31	33	37	42	31	.....	40	36.2 ^a		
	Minimum	27	26	19	14	18	19	29	.....	39	25	18	24	35	26	17	12	5	-2	7	15	15	18	23	27	18	16	23	26	17	18	24	20.1 ^a	
Boonton§§.....	Maximum	40	42	28	32	34	41	49	40	50	46	30	48	.....	37	26	21	11	18	34	28	42	49	35	27	31	38	33	29	35	41	34.5 ^a		
	Minimum	27	24	17	9	11	13	25	29	31	32	11	18	26	37	16	10	11	-3	7	18	34	28	42	49	35	27	31	38	33	29	35	41	34.5 ^a
Elizabeth.....	Maximum	45	42	42	26	30	36	45	45	46	46	31	34	57	57	30	24	14	19	31	34	39	47	37	34	31	38	41	34	38	43	36.6		
	Minimum	24	24	18	12	15	22	34	40	40	31	17	22	34	30	16	12	14	19	31	34	39	47	37	34	31	38	41	34	38	43	36.6		
Flemington.....	Maximum	43	43	43	35	34	47	43	43	48	31	17	22	34	30	16	12	14	19	31	34	39	47	37	34	31	38	41	34	38	43	36.6		
	Minimum	28	26	19	13	16	25	30	33	37	30	18	23	33	30	18	12	9	-7	-1	18	33	30	40	49	34	34	30	40	40	34	37	42	36.7
Highwood.....	Maximum	40	41	38	31	32	37	49	44	48	50	30	36	58	55	27	22	14	10	20	28	28	38	43	36	32	28	38	38	27	34	38	35.5	
	Minimum	26	23	18	10	16	22	36	29	37	25	18	24	36	26	17	10	4	-7	-3	14	8	24	15	30	14	4	26	24	10	7	21	18.2	
Jersey City.....	Maximum	42	45	42	35	33	37	48	47	52	52	35	37	58	59	32	18	12	6	-1	21	30	31	38	43	39	32	34	39	40	33	36	40	38.1
	Minimum	28	29	19	17	24	29	35	35	40	28	20	27	36	26	17	10	4	-7	-3	14	8	24	15	30	14	4	26	24	10	7	21	18.2	
Kearny.....	Maximum	40	44	34	26	34	44	50	44	51	51	30	44	59	60	26	22	12	11	19	29	38	45	37	30	32	40	40	40	28	34	39	36.5	
	Minimum	29	32	19	17	22	28	41	36	39	28	19	26	44	44	22	18	12	11	-2	5	15	16	25	23	27	20	14	31	27	17	18	22.8	
Lambertville.....	Maximum	46	47	43	30	33	32	48	44	51	50	30	36	58	58	.....	26	22	11	17	25	31	36	41	34	34	37	37	34	35	31	36.5 ^b		
	Minimum	24	28	25	14	18	21	30	31	38	28	.....	20	36	58	58	.....	26	22	11	17	25	31	36	41	34	34	37	34	35	31	36.5 ^b		
Little Falls.....	Maximum	41	42	30	31	34	44	49	42	52	50	30	36	58	58	.....	26	22	11	17	25	31	36	41	34	34	37	34	35	31	36.5 ^b			
	Minimum	30	27	19	13	15	21	29	33	35	40	20	21	30	36	18	14	15	0	3	11	12	25	18	22	21	8	18	20	10	18	20.0		
Newark.....	Maximum	39	44	30	32	33	44	50	45	52	52	30	36	58	58	.....	26	22	11	17	25	31	36	41	34	34	37	34	35	31	36.5 ^b			
	Minimum	30	29	19	18	22	30	41	39	42	25	22	30	45	40	59	25	21	18	11	16	29	27	37	44	33	26	31	37	29	35	39	35.8	
New Brunswick.....	Maximum	39	44	42	31	33	36	49	45	50	50	30	36	58	58	.....	26	22	11	17	25	31	36	41	34	34	37	34	35	31	36.5 ^b			
	Minimum	28	26	14	17	23	32	33	38	30	23	34	58	60	34	24	10	11	19	30	31	48	45	38	32	29	38	39	25	37	43	37.0		
Paterson.....	Maximum	44	43	43	38	32	37	48	48	49	49	32	37	57	57	32	18	12	10	4	16	12	25	22	31	10	7	26	21	12	12	19	20.3	
	Minimum	29	28	18	14	17	27	30	34	37	29	20	25	35	32	18	12	10	2	4	17	15	25	20	24	10	13	30	23	18	17	28	22.3	
Plainfield.....	Maximum	40	43	35	31	31	37	47	46	48	49	30	36	56	57	29	22	12	19	30	31	40	46	34	29	29	39	40	40	35	35	40	37.1	
	Minimum	26	24	18	11	14	22	32	30	38	26	18	23	35	26	17	12	6	-6	0	11	9	24	20	26	16	6	24	24	12	10	23	18.6	
Ridgefield.....	Maximum	39	41	27	29	32	44	47	42	50	50	28	38	55	57	25	22	17	9	18	27	28	36	42	35	26	29	38	39	23	35	37	34.4	
	Minimum	25	22	13	11	18	22	38	32	39	20	17	24	38	19	15	10	-1	-6	0	14	12	24	17	25	8	8	27	21	10	10	23	17.9	
Somerville.....	Maximum	41	44	42	33	34	36	48	45	45	48	32	35																					



Scale of Shades.

0 to 1 inch.
1 to 2 inches.
2 to 3 inches.
3 to 4 inches.
4 to 6 inches.
Over 6 inches.

Based on 700 records.

U. S. DEPARTMENT OF AGRICULTURE
WEATHER BUREAU
CHARLES F. MARVIN, CHIEF

U. S. DEPARTMENT OF AGRICULTURE

JUN 10 1920

CLIMATOLOGICAL DATA

NEW JERSEY SECTION

ANNUAL SUMMARY, 1919.

BY

G. HAROLD NOYES
METEOROLOGIST



TRENTON, N. J.
WEATHER BUREAU OFFICE
MAY 10, 1920.

ANNUAL MEAN ISOTHERMS AND PREVAILING WIND DIRECTION, 1919.



U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.

NEW JERSEY SECTION.

G. HAROLD NOYES, Section Director.
TRENTON, N. J.

VOL. XXIV.

ANNUAL SUMMARY, 1919.

No. 13.

GENERAL SUMMARY.

The mild weather, with the absence of frost in the ground, of the first three months, the abnormal cold of December, with the earliest zero temperatures on record at many stations, the unusual lateness of the first killing frosts of autumn and the excessive rains of July and August were the outstanding features of the weather during 1919 in New Jersey. The temperature was normal or above during every month excepting August and December, and only nine of the last 35 years had a higher annual mean temperature. The warmest portion of the State comprised the southwestern counties, and the coldest portion the northern districts of Passaic and Sussex Counties. It was an exceptionally wet year, only six years during the last 35 having a greater amount of precipitation. The mean total for the State was nearly 15 inches more than the amount for 1918. The greatest amounts fell along the central coast and over Cumberland County, while the least fell over Sandy Hook, the extreme northern counties, and portions of Burlington and the southeastern coast counties. It was unevenly distributed throughout the year, almost one-half of the year's fall occurring during March, May, July and August, with extremely heavy falls during the latter two months. The snowfall was but one-third of the normal, and more than one-half of the total amount fell during December. Cloudiness and wind movement were greater than usual.

The mean temperature for the year, 52.5° , was 1.1° above normal. The warmest month was July, 73.5° ; and the coldest, December, 28.8° . The highest temperature was 103° at Burlington on July 4th; and the lowest, 18° below zero at Culvers Lake on December 18th. The stations with the highest mean temperature were Bridgeton and Vineland, 55.4° ; and with the lowest, Charlotteburg, 48.0° . The greatest annual range of temperature was 110° at Layton, being from 99° to -11° .

The average precipitation for the State, for the year, was 52.10 inches, which was 5.05 inches above the normal. The greatest monthly average was 8.39 inches in July, and the least, 2.98 inches in December. The greatest monthly precipitation was 14.14 inches at Boonton in July, and the least, 0.37 inch at Woodbine in June. The greatest annual precipitation was 63.63 inches at Long Branch, and the least, 41.12 inches at Sandy Hook.

The average snowfall of the State was 11.1 inches, which was 22.5 inches below the normal. The greatest annual snowfall 27.9 inches at Culvers Lake, and the least, 5.1 inches at Cape May City.

The average number of days on which 0.01 inch or more of precipitation occurred was 131, which was 17 more than the normal. The average number of clear days was 161, which was 20 more than the normal; partly cloudy, 80, which was 36 less than the normal; cloudy, 124, which was 24 more than the normal.

The prevailing wind direction was from the northwest; the highest velocity was 88 miles per hour, sustained for 5 consecutive minutes, from the northwest at Long Branch on March 29th.

Unimportant occurrences of hail were on May 5, 17, 21, 23, 24, June 17, July 6, 21, 26, 27, August 15, 18, 20, October 12, and November 5. Minor damage from hail occurred on June 20 and August 25; and great damage from hail occurred at Montague on June 20, and at Phillipsburg on July 26-27.

THE WEATHER BY MONTHS.

JANUARY.—Notably pleasant weather continued from the close of last year into January of 1919. Warm weather the first three days of the month was followed by subnormal warmth through the 13th, and thereafter not a day was deficient in temperature. The mildness, while remarkable, was not unusual, but it was a most agreeable contrast with January, 1918, being 14° warmer. The snowfall occurred during the first decade and was unusually light, except that several inches fell in the northwestern part of Sussex County on the 3d. There was more clear weather than ever recorded in previous Januarys, and a less number of days with measurable precipitation than in any January except in 1896. The fine open weather was especially favorable for outdoor work on the farm, and, considering that it was the mid-winter month, a large amount of plowing was done. Small quantities of 5-inch and 6-inch ice were gathered. The ground was practically free from frost at the close of the month, and there was some swelling of leaf buds.

FEBRUARY.—The persistent warmth of December and January continued with but little interruption through February. This made the winter one of the conspicuously warm winters during the past fifty years or so. While there have been some few Februarys warmer than that of 1919, this ranked with the six mildest during the past 35 years. There was an almost total absence of snow, for in but few districts of the northern highlands was there a sufficient amount to require its removal. The precipitation, although mostly rain, was practically normal, but the amount of clear weather was greater than normal. There was but little frost in the ground in extreme northwestern districts at the close of the month, and none in other portions of the State, and plowing and other out-door work was advantageously carried on.

MARCH.—The predominant features were the persistent high temperatures and great wind movement. Moderately cold weather occurred only on the 6th, 7th, 14th, 15th, 16th, and from the 28th through the close of the month, and there were but four or five days wherein temperatures averaged under freezing. One of the longest continued and hardest blows this portion of the country has ever experienced occurred from the 27th to 30th. The heaviest rain of the month, in nearly all instances more than two inches, fell during this storm. The absence of snow was a notable feature, practically all occurring on the 14th and 28th, and amounted to but little over a quarter of the usual quantity. The gale of the 28th drifted the snow in northern counties and caused great damage to all forms of insecure construction, and in southern sections it blew the soil loose, burying early plants and literally sandblasting their leaves.

APRIL.—The mean temperature and rainfall were practically normal. However, there were noteworthy cold periods on the 1st and 2d and on the 25th and 26th. On the 1st and 2d, at several stations, the lowest records for April were equalled or exceeded. And on the 25th and 26th, while the cold was much less severe than the first period, as it followed a fortnight of mild weather its effect was felt in a much more pronounced manner, and was attended by a long persistent and hard blow from the northwest and north, with slight snow flurries. The greater portion of the rain fell in two storms, one of which, on the 12th, was about an inch, and the other, on the 16th, amounted to nearly two inches. The weather was of superior benefit for the growth of winter grains and grass, and favorable for outdoor work.

MAY.—There was more unpleasant weather than usual, and the skies were very generally overcast during most of the period from the 6th to the 24th. Warmth was also deficient during this cloudy period, particularly in the second week. It was warm, however, during the first five and last ten days of the month, so that the month averaged slightly above normal. The rainfall was substantially greater than normal, and seemed to be almost continuous from the 1st to the 11th, except on the 2d, 3d and 4th; the next rainy day was the 17th, and it rained

from the 21st to the 25th, inclusive. This excessive moisture was becoming a detriment to agriculture, but the rainy period stopped in time, so that its ultimate result was of the greatest benefit.

JUNE.—The temperature averaged slightly above normal and the precipitation somewhat below normal. The monthly mean temperature was the highest for the last ten years. The first week was the hottest period of the month, the temperatures being the highest on the 3d and 4th in nearly all portions except the coast. The hot wave was broken on the 6th by a moderate fall of rain which lasted nearly all day and was very beneficial for agriculture. On the 8th the temperature fell considerably and remained below normal for three days. From the 13th to the 25th temperatures averaged slightly above normal and the last three days of the month were considerably below normal, especially the 29th, when the temperature was unusually low and a moderate northerly wind prevailed.

JULY.—The month was notable for the great amount of rain that fell, and for its continuity, especially from the 13th to the 23d. The total amount for the State has been exceeded in July in but two instances, 1889 and 1897. Amounts exceeding 2 inches in 24 consecutive hours occurred at a large number of stations, and in a few instances over 3 inches, and in one locality over 6 and 7 inches. At several stations the rain fell at a rate of over an inch per day for several days. Along the southeastern coast the severity of the rain was less intense. It rained every day from the 12th to the 23d, except on the 14th. Farm lands were flooded, and great quantities of wheat and rye standing in the shock in the fields sprouted. The month was practically normal in warmth, the first and last weeks were considerably above normal, and the middle fortnight cooler. Temperatures of 100° and above occurred in mostly all districts on the 4th and 5th, and the heat was attended by some suffering and general discomfort.

AUGUST.—The month was cool and wet. Temperatures were normal or slightly above from the 20th to 25th only. The excess of precipitation was most pronounced along the southeastern coast, where by far the greatest volume of the month's fall occurred on the 13th-14th. The rain amounted to over 8 inches in the 24 consecutive hours during this storm, and was one of the heaviest falls of rain ever noted in such a short period in New Jersey. At Atlantic City four and three-quarters inches fell in a little less than four hours. The gale, driving the rain, wrought considerable havoc along the coast to insecure objects and vegetation. The first and last weeks were favorable for crop development, but the earlier excessive rains had caused more or less permanent injury to most crops.

SEPTEMBER.—A normal month, the only departure being a precipitation deficiency of almost an inch. The temperatures were generally below normal in northern, central and coast sections, but a sufficient excess prevailed in the southern sections to bring the State mean to normal. Readings of 90° or higher occurred at most stations on the 7th and 8th, and other warm days were the 20th to 23d, and the 30th. Precipitation was greatest in the northeastern counties, being generally in excess of the normal there, while the deficiencies in the remainder of the State were from one to three inches. Cool and overcast conditions, with rain, prevailed during the first half of the month, and the lack of sunshine and warmth was apparent in the slow progress of crops. However, a quick recovery and advance were made during the third week, and progress continued to the close of the month.

OCTOBER.—Abnormally warm weather, attended by frequent, though relatively light, rains, excessive cloudiness with the resulting deficient sunshine, and the absence of damaging frosts in most portions of the State were the salient features of the month. The temperature averaged practically 5° above the normal, and the excess was most pronounced in the Southern Interior. The rainfall was above normal in The Highlands and the Kittatinny Valley, and below normal elsewhere, making a

deficiency of 0.21 inch for the State. Rainy days occurred at brief intervals throughout the month, the only period which was free from precipitation being the 18th to 21st. Consequently farm work was delayed somewhat, though the close of the month found all staple crops gathered, plowing and drilling of winter grain progressing, and grass, grain, and truck growing as though it were spring.

NOVEMBER.—Temperature, precipitation, sunshine and wind movement were slightly above the average. First killing frosts of autumn were unusually late and did not form in southern counties until the 7th and 9th and in extreme southern Cape May County until the 21st. Snow flurries occurred in Sussex County on the 5th, and in the greater portion of the State on the 19th. Digging of late potatoes continued practically throughout the month in southern counties. Some truck was still producing during the first week.

DECEMBER.—The month was abnormally cold, averaging somewhat over 4° subnormal. The deficiency commenced during the first week and, save for the short periods of the 7th-11th and 13th-14th, continued throughout the month. Zero temperatures occurred in all but the extreme southern counties on the 18th, and were the earliest zero temperatures on record at many stations. There was a deficiency of almost an inch in precipitation, while the snowfall was slightly in excess of the normal. At the close of the month the ground was slightly covered with snow in the northern half, and practically bare in the southern half of the State. With the freezing over of the Delaware River, on the 18th, river navigation to Trenton closed, being one of the earliest dates on record. Commercial ice crop was ready for harvesting at the close of the month, when the thickness averaged 8 inches.

COMPARATIVE ANNUAL DATA FOR THE STATE.

Year.	Temperature.			Average precipitation.	Year.	Temperature.			Average precipitation.
	Mean.	High-est.	Low-est.			Mean.	High-est.	Low-est.	
1885	50.5	100	-2	37.87	1903	51.7	100	-16	56.25
1886	50.2	98	-10	46.54	1904	49.3	100	-34	37.41
1887	51.1	102	-6	47.66	1905	51.3	102	-18	42.06
1888	50.0	99	-12	52.20	1906	52.8	98	-15	46.38
1889	52.8	95	-3	63.33	1907	50.4	96	-22	51.65
1890	53.2	101	0	49.34	1908	52.6	106	-17	42.58
1891	53.2	102	1	47.98	1909	52.0	100	-15	40.86
1892	51.4	105	-6	42.04	1910	52.0	99	-15	39.73
1893	50.8	103	-21	47.90	1911	52.6	104	-12	50.36
1894	53.0	106	-11	47.37	1912	51.3	100	-32	46.61
1895	51.7	109	-12	37.29	1913	54.2	100	-11	46.99
1896	51.7	105	-15	42.51	1914	51.4	99	-18	39.23
1897	52.0	102	-6	51.72	1915	52.5	98	-5	47.37
1898	53.2	107	-15	52.35	1916	51.2	100	-18	38.17
1899	52.1	103	-21	45.84	1917	49.6	104	-29	40.80
1900	53.8	104	-9	42.71	1918	51.2	108	-24	37.65
1901	51.4	107	-8	51.80	1919	52.5	103	-18	52.10
1902	51.8	100	-11	59.44					

KILLING FROSTS.

Stations.	Last in spring.	First in autumn.	Stations.	Last in spring.	First in autumn.
<i>The Highlands and Kittatinny Valley.</i>			<i>The Southern Interior.</i>		
Belvidere	Apr. 20	Oct. 13	South Orange	Apr. 3	Nov. 9
Charlotteburg	May 19	Sept. 27			
Culvers Lake	do. 19	do. 27			
Dover	Apr. 23	do. 27			
Layton	do. 28	Oct. 8	Bridgeton	Apr. 25	Nov. 7
Newton	do. 26	do. 13	Burlington	do. 2	do. 8
Phillipsburg	do. 25	Nov. 3	Camp Dix	do. 26	do. 7
Sussex		Oct. 8	Clayton	do. 3	do. 7
<i>The Red Sandstone Plain.</i>			Hightstown	do. 2	do. 7
Bergen Point	Apr. 27	Nov. 14	Imlaytown		Oct. 19
Boonton	do. 27	Oct. 13	Indian Mills	Apr. 26	Nov. 7
Elizabeth	do. 26	Nov. 9	Lakewood	do. 28	do. 9
Flemington	do. 25	do. 10	Moorestown	do. 26	do. 9
Highwood	do. 25	Oct. 8	Pleasantville		do. 12
Jersey City	do. 3	Nov. 9	Trenton	Apr. 26	do. 9
Kearny		do. 9	Tuckerton	do. 3	do. 9
Lambertville	Apr. 3	do. 10	Vineland	do. 3	do. 9
Little Falls	do. 25	do. 9	Woodbine		do. 7
Newark	do. 26	do. 9	<i>The Sea Coast.</i>		
New Brunswick	do. 26	do. 9	Asbury Park		Nov. 14
Palisades Park	May 1	Oct. 13	Atlantic City	Apr. 3	do. 11
Paterson	Apr. 26	do. 13	Cape May City	do. 12	do. 21
Plainfield	do. 2	Nov. 10	Long Branch	do. 23	do. 10
Somerville	do. 28	do. 10	Sandy Hook	do. 25	do. 19

Climatological Data for the Year 1919.

STATION.	Counties.	Elevation, feet.	Temperature (degrees Fahrenheit).						Precipitation (inches).						Total snowfall (unmelted).	Number days with .01 or more.	Sky.			Prevailing direction of wind.
			Length of record, years.	Annual mean.	Highest.	Date.	Lowest.	Date.	Length of record, years.	Total for the year.	Greatest monthly.	Month.	Least monthly.	Month.			Number clear days.	Number partly cloudy days.	Number cloudy days.	
The Highlands and Kittatinny Valley.																				
Belvidere.....	Warren.....	289	28	51.1	97	June 3	- 7	Dec. 18	28	54.48	6.92	July	2.02	Sept.	12.2	126	207	11	117	.....
Charlotteburg.....	Passaic.....	719	27	48.0	96	July 4	-10	do. 19	27	56.52	11.09	do.	2.29	Dec.	.....	.....	.....	.....	.....	w.
Culvers Lake.....	Sussex.....	848	.....	.....	.....	.....	-18	do. 18	18	52.80	7.09	do.	2.16	do.	27.9	153	184	75	106	e.
Dover.....	Morris.....	600	35	49.5	96	July 5	- 8	do. 18	35	58.15	10.40	do.	2.72	Apr.	16.2	140	82	166	117	.....
Layton.....	Sussex.....	480	19	49.6	99	July 4†	-11	Dec. 18	19	47.67	9.71	July	1.37	Feb.	16.3	141	179	42	144	sw.
Newton.....	Sussex.....	769	38	49.7	94	June 3	-10	do. 18	38	48.77	5.83	Aug.	1.75	Sept.	21.9	143	152	66	147	sw.
Phillipsburg.....	Warren.....	363	29	51.5	100	July 5	- 5	do. 18	37	51.80	6.87	July	2.30	Apr.	20.3	141	188	54	123	nw.
The Red Sandstone Plain.																				
Bergen Point.....	Hudson.....	37	22	52.8	98	July 4†	- 2	Dec. 18	22	.....	7.55	Aug.	.....	.....	9.0	.....	.....	.....	.....	nw.
Boonton.....	Morris.....	400	5	50.1	99	do. 4†	- 7	do. 18	29	56.36	14.40	July	1.84	Dec.	9.7	143	238	39	88	nw.
Elizabeth.....	Union.....	45	40	53.1	100	do. 4†	- 5	do. 18	40	55.30	8.88	do.	2.85	do.	12.2	132	147	101	117	nw.
Flemington.....	Hunterdon.....	140	22	53.7	101	do. 4†	- 7	do. 18	31	56.64	12.66	do.	2.49	Apr.	11.3	133	194	62	109	w.
Highwood.....	Bergen.....	90	30	51.1	98	July 4†	- 7	Dec. 18	30	51.69	7.89	July	2.47	Oct.	15.9	129	128	97	140	nw.
Jersey City.....	Hudson.....	10	20	54.5	102	do. 4†	- 1	do. 18	20	52.47	7.78	do.	2.55	Apr.	13.3	131	128	126	111	nw.
Lambertville.....	Hunterdon.....	80	32	51.6	96	do. 4	- 5	do. 18	32	.....	10.98	do.	2.90	Oct.	.....	.....	.....	.....	.....	n.
Little Falls.....	Passaic.....	180	5	.....	105	do. 5	0	do. 18	16	51.04	7.32	do.	2.17	June	.....	134	174	67	124	w.
Newark.....	Essex.....	159	76	52.4	101	July 4	0	Dec. 18	77	52.40	8.83	July	2.51	Apr.	12.0	129	168	79	118	nw.
New Brunswick.....	Middlesex.....	110	66	53.2	98	do. 4†	- 4	do. 18	66	52.41	8.33	do.	2.01	Sept.	9.0	135	179	85	101	nw.
New Milford.....	Bergen.....	.....	.....	.....	.....	.....	.....	.....	1	47.97	6.46	do.	1.67	June	.....	121	.....	.....	.....	.....
Palisades Park.....	Bergen.....	80	4	51.1	100	do. 4	- 6	Dec. 18	4	51.18	8.10	do.	2.60	Dec.	17.3	145	147	95	123	nw.
Paterson.....	Passaic.....	80	48	54.1	102	July 4	2	Dec. 18	48	49.00	7.96	July	2.00	June	8.2	131	85	41	239	nw.
Plainfield.....	Union.....	100	.....	.....	97	do. 5	- 6	do. 18	.....	.....	8.56	do.	2.91	Apr.	.....	.....	.....	.....	.....	nw.
Pompton Plains.....	Morris.....	195	.....	.....	.....	.....	.....	.....	17	58.63	12.78	do.	2.41	Dec.	.....	123	.....	.....	.....	.....
Somerville.....	Somerset.....	60	37	.....	99	do. 4	- 4	Dec. 18	37	.....	12.33	do.	2.81	June	10.7	.....	.....	.....	.....	nw.
South Orange.....	Essex.....	200	49	51.9	97	July 4	- 3	Dec. 18	49	57.09	7.44	July*	2.97	Apr.	15.0	124	162	87	116	w.
Woodcliffe Lake.....	Bergen.....	.....	.....	.....	.....	.....	.....	.....	1	.....	5.46	Mar.	2.21	do.	.....	.....	.....	.....	.....	.....
New York, N. Y.....	.....	365	49	52.9	98	July 4	0	Dec. 18	49	48.38	7.93	July	2.23	June	10.8	133	93	113	159	nw.
The Southern Interior.																				
Bridgeton.....	Cumberland.....	30	33	55.4	97	July 4†	2	Dec. 18	38	59.69	11.38	July	1.98	Sept.	6.5	122	.....	.....	.....	nw.
Burlington.....	Burlington.....	12	6	55.0	103	do. 4	0	do. 18	33	48.82	8.23	do.	1.69	June	10.1	128	236	39	90	nw.
Camp Dix.....	Burlington.....	.....	1	54.1	102	do. 5	- 2	do. 18	1	46.61	8.37	do.	1.97	Apr.	.....	123	106	88	171	nw.
Clayton.....	Gloucester.....	126	23	.....	102	do. 4†	1	do. 18	27	.....	.....	.....	1.65	Sept.	8.9	118	.....	.....	.....	nw.
Hammonton.....	Atlantic.....	103	.....	.....	.....	.....	.....	.....	17	48.62	7.75	July	1.74	Sept.	.....	112	225	82	58	nw.
Hightstown.....	Mercer.....	120	27	.....	100	July 4†	- 2	Dec. 18	27	.....	8.62	do.	2.03	do.	.....	.....	.....	.....	.....	nw.
Indian Mills.....	Burlington.....	76	29	53.8	101	do. 5	- 4	do. 18	30	51.91	9.11	do.	1.43	do.	10.0	124	.....	.....	.....	nw.
Lakewood.....	Ocean.....	54	16	.....	100	do. 4	- 4	do. 18	16	51.45	9.70	Aug.	2.25	do.	9.0	124	.....	.....	.....	w.
Moorestown.....	Burlington.....	75	57	53.9	99	July 5	0	Dec. 18	57	48.73	10.10	July	1.73	June	7.9	120	.....	.....	.....	nw.
Northfield.....	Atlantic.....	25	.....	.....	.....	.....	.....	.....	12	48.72	12.32	Aug.	1.56	Sept.	5.8	125	.....	.....	.....	.....
Pleasantville.....	Atlantic.....	26	.....	.....	.....	.....	.....	.....	21	46.34	8.21	do.	1.63	do.	.....	133	207	46	112	.....
Trenton.....	Mercer.....	190	48	53.2	101	July 5	- 1	Dec. 18	48	46.75	10.41	July	1.39	June	6.6	128	111	104	150	n.
Tuckerton.....	Ocean.....	23	21	53.6	98	July 4	- 1	Dec. 18	26	60.72	12.46	Aug.	1.92	Sept.	11.8	118	155	117	93	nw.
Vineland.....	Cumberland.....	109	51	55.4	101	do. 5	2	do. 18	51	.....	7.59	do.	1.98	Nov.	.....	.....	.....	.....	.....	.....
Woodbine.....	Cape May.....	43	28	.....	98	do. 5	1	do. 21	28	.....	12.88	do.	0.37	June	.....	.....	.....	.....	.....	.....
Philadelphia, Pa.....	.....	117	49	55.7	100	do. 4	4	do. 18	49	49.12	10.30	July	2.19	do.	11.1	132	125	101	139	nw.
The Sea Coast.																				
Asbury Park.....	Monmouth.....	22	30	.....	98	July 5	- 1	Dec. 18	30	.....	7.37	Aug.	2.20	Oct.	.....	.....	193	70	102	w.
Atlantic City.....	Atlantic.....	16	46	54.0	99	do. 3	3	do. 18	46	49.43	11.57	do.	1.47	Sept.	5.2	139	147	87	131	w.
Cape May City.....	Cape May.....	17	35	54.8	98	do. 3	3	do. 18	35	48.75	12.60	do.	1.15	June	5.1	132	148	80	137	nw.
Long Branch.....	Monmouth.....	25	12	51.2	97	do. 3	- 1	do. 18	12	63.63	9.64	do.	2.26	Sept.	11.5	140	113	100	152	nw.
Sandy Hook.....	Monmouth.....	22	21	52.9	98	do. 4	3	do. 18	21	41.12	5.79	July	2.50	June	7.1	133	124	116	125	nw.

† Also on other dates.

* Also in August.

Monthly and Annual Precipitation for the Year 1919, with Departures from the Normal.

STATIONS.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.		Annual.	
	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.
<i>The Highlands and Kittatinny Valley.</i>																										
Belvidere.....	3.70	-0.05	3.80	-0.52	4.75	+0.71	3.44	+0.17	5.36	+1.47	5.39	+0.99	6.92	+1.32	6.75	+1.79	2.02	-1.90	4.35	+0.51	5.54	+2.05	2.46	-1.68	54.48	+4.86
Charlotteburg.....	3.03	-1.33	3.50	-1.16	6.08	+2.14	2.86	-1.07	4.97	+0.17	3.48	-0.78	11.09	+6.21	5.86	+1.11	4.00	-0.68	4.96	+0.55	4.40	+0.67	2.29	-2.10	56.52	+3.73
Culvers Lake.....	2.79	-0.39	3.23	-0.12	4.71	+1.28	2.20	-1.67	4.97	+1.47	6.45	+2.61	7.09	+2.33	5.09	+0.56	3.39	-0.42	4.54	+0.89	6.18	+3.36	2.16	-1.37	52.80	+8.53
Dover.....	3.58	-0.91	3.83	-0.41	6.23	+2.33	2.72	-0.79	4.17	+0.03	4.17	+0.05	10.40	+4.92	6.08	+1.08	4.41	-0.07	4.97	+0.97	4.50	+0.87	3.09	-1.03	58.15	+7.04
Layton.....	2.24	-1.26	1.37	-2.09	5.92	+2.25	2.82	-0.49	4.46	+1.13	4.08	+0.66	9.71	+5.28	3.09	-0.55	2.40	-1.47	4.22	+0.89	5.19	+2.11	2.17	-2.00	47.67	+4.46
Newton.....	3.77	+0.27	2.98	-0.85	4.22	+0.62	2.41	-0.80	4.39	+0.25	5.10	+1.31	5.73	+1.03	5.83	+1.42	1.75	-1.93	4.87	+1.16	5.36	+2.42	2.36	-1.34	48.77	+3.56
Phillipsburg.....	3.40	-0.25	3.30	-0.49	4.61	+0.96	2.30	-0.72	4.71	+0.66	4.61	+0.46	6.87	+2.02	6.41	+1.71	3.83	+0.05	4.14	+0.54	4.95	+1.67	2.67	-1.01	51.80	+5.60
Sussex.....																		4.08	+0.73	5.88	+2.82	2.20	1.54			
<i>The Red Sandstone Plain.</i>																										
Bergen Point.....	3.52	-0.90	3.73	-0.66			2.55	-1.34	5.80	+1.82	3.02	-0.93	4.81	-0.70	7.55	+2.49	3.83	-0.70	2.77	-1.31	3.96	+0.38	2.87	-1.12		
Boonton.....	3.40	-0.80	3.66	-0.55	6.26	+2.52	2.73	-1.03	4.19	-0.06	2.32	-1.42	14.14	+8.68	5.28	-0.11	4.21	-0.28	3.90	+0.06	4.17	+0.50	1.84	-2.26	56.36	+5.51
Chatham.....			3.72	-0.14			2.87	-0.78																		
Elizabeth.....	3.53	-0.57	3.74	-0.52	5.86	+1.60	2.87	-0.70	5.37	+1.45	3.43	-0.17	8.88	+3.62	6.68	+2.14	4.41	+0.35	4.24	+0.42	3.44	+0.10	2.85	-0.94	55.30	+6.78
Flemington.....	3.73	+0.26	3.27	-0.12	5.06	+1.45	2.49	-0.95	4.10	-0.19	3.96	-0.41	12.66	+7.70	6.06	+1.65	4.54	+0.56	3.68	+0.23	4.02	+0.67	3.07	-0.61	56.64	+10.24
Highwood.....	3.13	-0.94	3.20	-1.33	6.50	+2.35	2.86	-0.53	4.37	+0.53	3.47	-0.31	7.89	+2.52	5.63	+0.56	6.08	+1.92	2.47	-2.06	3.43	-0.20	2.66	-1.50	51.69	+1.01
Jersey City.....	3.36	-0.50	3.46	-0.48	5.88	+1.78	2.55	-1.15	4.72	+1.54	2.84	-0.46	7.78	+3.00	7.12	+2.47	4.78	+1.07	3.78	+0.03	3.52	+0.12	2.68	-0.88	52.47	+6.54
Kearny.....																		3.89		4.36		2.79				
Lambertville.....	3.53	-0.21			5.95	+1.84	2.96	-0.44	4.66	+0.59	4.18	-0.10	10.98	+5.94	7.07	+2.31	3.78	-0.40	2.90	-0.97	3.16	-0.45	2.91	-0.87		
Little Falls.....	3.26	-0.96	3.22	-1.07	6.08	+2.09	3.35	-0.19	5.41	+0.65	2.17	-2.11	7.32	+1.73	4.74	-0.37	5.01	+0.41	3.92	+0.08	3.82	+0.30	2.74	-1.10	51.04	-0.54
Newark.....	3.07	-0.69	3.44	-0.24	5.03	+1.10	2.51	-1.22	4.74	+0.70	2.73	-0.90	8.83	+4.10	6.82	+1.58	4.38	+0.53	4.05	+0.28	3.68	+0.18	3.12	-0.68	52.40	+4.74
New Brunswick.....	3.41	-0.40	3.60	-0.09	6.09	+2.18	2.73	-1.06	5.11	+1.20	5.31	+1.54	8.33	+3.28	6.30	+1.21	2.01	-1.84	3.13	-0.46	3.72	+0.13	2.67	-1.08	52.41	+4.61
New Milford.....	2.00		3.20		6.45		2.61		4.48		1.67		6.46		4.40		5.93		3.76		3.58		2.43		47.97	
Palisades Park.....	3.41		3.46		6.09		2.67		4.29		2.62		8.81		6.15		5.18		3.22		3.39		2.60		51.18	
Paterson.....	2.99	-1.07	3.17	-1.23	7.40	+3.17	2.68	-0.81	5.28	+0.79	2.00	-2.32	7.96	+2.63	4.05	-1.08	5.18	+0.74	3.64	-0.51	2.56	-0.70	2.09	-2.02	49.00	-2.41
Plainfield.....					6.20	+2.39	2.91	-0.99	6.15	+2.32	3.54	-0.59	8.56	+3.16	5.13	+0.26	4.21	-0.24	4.33	+0.68	3.86	+0.27	2.96	-0.93		
Pompton Plains.....	3.65	-0.74	3.55	-0.88	6.28	+2.24	2.52	-1.04	4.22	-0.18	3.12	-1.04	12.78	+7.23	5.47	+0.39	6.28	+1.73	4.25	+0.49	4.10	+0.61	2.41	-1.33	58.63	+7.52
Somerville.....	3.47	-0.01	3.30	-0.25	6.69	+2.74	2.97	-0.58	4.63	+0.51	2.81	-1.34	12.33	+7.20	5.74	+1.03	4.21	+0.55			4.22	+0.83	2.88	-0.69		
South Orange.....	3.63	-0.51	3.87	-0.15	6.23	+2.42	2.97	-0.52	6.54	+3.08	3.27	-0.29	7.44	+2.32	7.44	+2.05	4.42	+0.33	3.62	-0.19	4.62	+1.25	3.04	-0.79	57.09	+9.00
Woodcliff Lake.....	2.51		2.97		5.46		2.21		4.69		2.84		5.24		3.74		5.18		3.61		2.94		2			
New York, N. Y.....	3.35	-0.44	3.45	-0.29	4.69	+0.59	2.55	-0.75	3.81	+0.63	2.23	-1.03	7.93	+3.39	7.74	+3.21	3.60	+0.01	3.17	-0.54	3.33	-0.11	2.53	-0.92	48.38	+3.75
<i>The Southern Interior.</i>																										
Bridgeton.....	3.81	+0.07	3.65	-0.45	3.77	-0.70	3.45	+0.02	5.83	+1.90	5.56	+1.79	11.38	+6.95	8.30	+3.56	1.98	-1.83	3.54	+0.01	3.28	+0.02	5.14	+1.27	59.69	+12.61
Burlington.....	3.72	+0.18	3.51	-0.23	5.58	+1.50	3.15	-0.22	4.45	+0.22	1.69	-2.23	8.23	+3.20	6.34	+0.73	2.48	-1.44	2.73	-0.72	3.61	-0.13	3.33	-0.58	48.82	+0.28
Camp Dix.....	3.56		2.93		4.43		1.97		5.36		1.98		8.37		5.57		3.13		2.67		2.88		3.76		46.61	
Clayton.....	4.06	+0.30	2.97	-1.05	4.31	+0.33			5.62	+2.36	3.41	+0.01	9.80	+5.53			1.65	-2.37	2.59	-0.92	2.62	-0.91	2.82	-0.87		
Hammononton.....	4.10	+0.15	3.29	-0.60	4.39	+0.02	3.23	-0.61	4.82	+0.80	3.13	-0.06	7.75	+3.06	5.82	+1.14	1.74	-1.92	3.22	-0.26	3.16	-0.56	3.97	-0.13	48.62	+1.03
Hightstown.....			3.26	-0.48	5.02	+0.66	3.38	-0.53	5.85	+2.03	2.20	-1.81	8.62	+2.65	5.26	+0.49	2.03	-1.85	3.48	+0.25	3.75	+0.09	3.58	-0.12		
Imlaytown.....															5.79	+0.93	2.80	-1.51	2.95	-1.12	3.33	-0.33	3.49	-0.08		
Indian Mills.....	3.93	+0.23	3.30	-0.66	4.62	+0.52	2.98	-0.15	4.88	+0.54	3.83	+0.04	9.11	+5.05	7.84	+2.67	1.43	-2.74	2.65	-0.93	3.26	-0.34	4.08	-0.01	51.91	+4.52
Lakewood.....	3.35	-0.43	3.45	-0.39	5.01	+0.58	3.23	-0.50	4.63	+0.77	2.62	-1.05	7.71	+2.68	9.70	+4.63	2.25	-1.63	2.35	-1.35	3.31	-0.34	3.84	+0.12	51.45	+3.09
Moorestown.....	3.02	-0.46	3.12	-0.51	5.26	+1.45	3.08	-0.11	4.96	+0.93	1.73	-2.07	10.10	+5.52	5.94	+1.20	2.42	-1.34	2.75	-0.89	2.68	-0.74	3.67	+0.09	48.73	+3.07
Northfield.....	3.96	+0.45	3.25	-0.40	4.14	+0.14	4.33	+0.96	5.17	+1.85	1.95	-1.62	4.45	+0.52	12.32	+7.57	1.56	-1.74	2.01	-1.49	2.94	-0.36	2.64	-1.16	48.72	+4.72
Pleasantville.....	3.94	+0.54	3.50	+0.20	4.17	+0.27	4.44	+0.95	5.07	+1.71	2.04	-1.55	4.91	+0.86	8.21	+3.52	1.63	-1.78	2.40	-1.28	3.28	-0.08	2.75	-0.92	46.34	+2.44
Trenton.....	3.28	+0.11	3.25	+0.06	4.64	+0.60	2.91	-0.38	4.18	+0.66	1.39	-2.10	10.41	+5.64	4.82	-0.55	2.74	-0.85	3.09	-0.32	3.10	-0.33	2.94	-0.22	46.75	+2.32
Tuckerton.....	4.21	+0.55	2.97	-0.82	4.84	+0.45	4.79	+1.00	7.68	+4.25	2.66	-1.11	8.72	+4.82	12.46	+6.68	1.92	-1.44	3.64	-0.03	3.83	+0.37	3.00	-1.28	60.72	+13.44
Vineland.....	3.36	-0.41	3.40	-0.65			3.20	-0.14	6.09	+2.32	2.41	-1.17	6.38	+1.87	7.59	+2.62	2.35	-1.49	3.79	+0.33	1.98	-1.32	4.35	+0.51		
Woodbine.....											-0.37	-3.13	5.53	+1.51	12.88	+8.58	1.04	-2.99	2.44	-1.19	2.32	-0.83				
Philadelphia, Pa.....	3.35	-0.06	3.04	-0.34	4.81	+1.36	3.17	+0.26	4.53	+1.33	2.16	-1.11	10.30	+5.97	6.19	+1.58	2.82	-0.56	2.59	-0.51	2.80	-0.26	3.33	+0.29	49.12	+7.95
<i>The Sea Coast.</i>																										
Asbury Park.....			3.30	-0.53	4.69	+0.39			3.45	-0.26	4.53	+0.73	7.29	+2.04	7.37	+2.23	3.31	+0.07	2.20	-1.						

Monthly and Annual Mean Temperatures for the Year 1919, with Departures from the Normal.

STATIONS.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.		Annual.	
	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.
<i>The Highlands and Kittatinny Valley.</i>																										
Belvidere.....	31.4	+3.9	32.1	+4.7	42.3	+5.5	^a 49.3	-0.3	60.2	-0.5	69.8	+0.8	72.8	+0.1	67.8	-3.0	63.8	-1.3	57.7	+5.2	^b 40.4	-0.8	25.8	-5.0	51.1	+0.8
Charlotteburg.....	^b 30.0	+2.9	28.6	+2.3	^a 37.8	+3.1	44.4	-2.3	56.4	-0.9	65.8	+0.3	68.8	-0.7	63.6	-4.1	^a 61.2	-1.1	54.0	+3.6	^a 39.6	-0.9	^d 26.0	-4.6	48.0	-0.2
Dover.....	31.2	+4.6	^b 30.9	+4.7	40.3	+5.4	46.8	-0.5	59.2	+0.6	68.0	+0.7	70.4	-1.0	^a 66.2	-3.0	^b 62.5	-0.1	54.6	+3.9	39.6	-0.7	24.8	-5.3	49.5	+0.7
Layton.....	29.8	+5.8	31.6	+7.5	^b 41.3	+7.1	46.4	-0.1	57.9	0.0	69.4	+3.1	71.3	+1.1	66.5	-1.9	63.0	+1.2	53.8	+4.2	39.6	+1.2	24.8	-2.6	49.6	+2.2
Newton.....	29.9	+4.2	29.9	+4.2	^a 40.2	+4.4	47.2	-0.4	59.4	+0.1	69.8	+2.1	70.7	-0.2	66.8	-3.0	63.7	-0.1	^b 55.3	+3.6	39.0	-0.8	^b 24.6	-4.7	49.7	+0.7
Phillipsburg.....	31.6	+3.7	32.4	+4.6	41.6	+3.7	49.3	-0.3	61.0	-0.3	71.2	+1.5	74.0	0.0	69.0	-2.7	64.8	-0.6	56.3	+3.4	41.1	-0.5	25.6	-5.7	51.5	+0.6
Sussex.....																			56.6	+4.4	^a 40.4	-0.1	25.4	-4.4		
<i>The Red Sandstone Plain.</i>																										
Bergen Point.....	^a 34.4	+4.2	34.0	+3.6	^a 43.2	+5.4	^b 49.3	+0.8	^b 62.0	+2.3	69.8	+1.0	73.7	+0.3	69.8	-1.9	^a 66.0	-0.7	58.8	+4.5	^a 43.8	+0.8	^b 28.2	-4.8	52.8	+1.4
Boonton.....	30.7		31.2		40.2		^a 46.8		59.2		68.6		72.4		67.3		63.4		55.0		40.8		24.6		50.1	
Elizabeth.....	34.5	+4.4	34.4	+4.0	44.3	+5.9	49.6	-1.2	61.4	-0.8	70.4	-0.8	74.4	-1.1	69.6	-3.9	66.2	-0.8	59.7	+5.0	43.8	+0.2	28.6	-4.9	53.1	+0.5
Flemington.....	34.1	+4.5	35.0	+4.5	44.9	+7.4	51.1	+2.0	62.2	+2.3	71.4	+2.3	74.6	+0.7	70.9	-0.9	67.1	+2.0	60.4	+6.3	44.2	-1.4	28.3	-3.7	53.7	+2.4
Highwood.....	32.6	+3.7	32.3	+3.6	42.0	+5.8	48.2	-0.3	59.6	-0.1	68.8	+0.5	72.2	-0.3	67.7	-3.5	63.8	-0.4	57.4	+4.7	42.3	0.0	26.8	-5.8	51.1	+0.6
Jersey City.....	35.6	+4.8	35.0	+3.8	44.0	+5.8	50.3	+0.9	63.4	+2.3	72.1	+1.9	75.9	+1.2	72.0	-1.3	68.2	+1.0	60.8	+5.2	45.6	+2.0	30.8	-3.2	54.5	+2.1
Kearny.....																			59.5		44.2		29.6			
Lambertville.....	^a 37.0	+1.6	^a 32.8	+2.4	42.2	+3.2	47.9	-2.5	59.4	-2.3	69.0	-1.3	72.0	-2.5	^a 68.8	-3.6	^a 64.2	-1.8	^a 59.6	+6.0	43.4	+0.4	^b 28.1	-5.2	51.6	-0.5
Little Falls.....	34.2		^a 33.8		^a 42.8		50.9		62.8				76.8				65.6		57.1		43.7		28.4			
Newark.....	33.4	+3.8	33.3	+3.5	41.8	+4.3	48.3	-0.8	60.7	-0.1	69.6	-0.1	74.8	+0.5	70.1	-2.5	65.8	-0.1	57.7	+3.3	44.8	+1.9	29.0	-4.0	52.4	+0.8
New Brunswick.....	34.4	+3.9	34.1	+2.8	44.8	+6.6	50.0	+0.3	61.7	+1.1	70.2	+0.6	73.6	-0.7	70.3	-2.1	66.0	0.0	60.4	+5.8	44.4	+0.8	28.6	-4.5	53.2	+1.2
Palisades Park.....	32.5		32.4		41.6		47.6		59.7		69.0		72.8		68.0		64.1		56.4		42.4		26.2		51.1	
Paterson.....	35.0	+5.6	34.4	+4.2	44.3	+5.8	51.1	+0.8	62.8	+1.5	72.0	+1.9	^a 75.5	+1.2	71.2	-0.8	68.1	+1.9	60.0	+5.6	45.0	+1.7	29.4	-3.7	54.1	+2.2
Plainfield.....					43.8	+7.2	49.4	+1.2	60.6	+0.3	68.9	-0.4	72.5	-1.4	68.6	-3.5	^a 64.8	-0.4	58.0	+5.0	43.0	+1.0	27.2	-4.7		
Somerville.....	33.0	+3.8	32.6	+2.6	42.7	+5.8	48.6	-0.1	60.7	+0.6	69.6	+0.4	73.2	-0.7	69.9	-2.0	^a 65.8	+0.5			44.8	+2.8	28.4	-3.5		
South Orange.....	33.6	+4.9	33.7	+4.7	42.9	+6.1	48.7	+0.4	60.6	+0.6	69.7	+0.9	73.8	+0.7	68.6	-2.1	64.6	+0.5	56.3	+3.4	42.6	+1.0	27.4	-4.6	51.9	+1.4
New York, N. Y.....	35.2	+5.0	34.7	+4.0	42.0	+4.5	48.8	+0.7	61.0	+1.7	69.7	+1.2	74.0	+0.5	70.2	-2.0	66.5	0.0	58.4	+2.8	44.4	+0.4	30.0	-4.4	52.9	+1.2
<i>The Southern Interior.</i>																										
Bridgeton.....	36.5	+3.5	36.3	+2.4	46.6	+5.5	53.4	+1.6	63.8	-0.1	71.0	-2.4	74.6	-2.5	72.6	-2.5	68.5	+0.3	63.4	+6.7	46.6	+1.7	31.6	-4.0	55.4	+0.8
Burlington.....	35.7	+4.9	35.4	+4.5	46.2	+6.3	52.8	+1.7	63.6	+1.5	72.6	+1.9	76.4	+1.1	72.1	-1.3	68.4	+1.4	61.4	+6.7	45.2	+1.2	30.4	-3.7	55.0	+2.2
Camp Dix.....	36.0		35.6		45.8		50.0		61.8		69.8		74.4		70.6		66.2		60.2		44.0		29.4		54.1	
Clayton.....	35.8	-4.9			^a 45.4	+5.6	^b 51.8	+1.5	62.9	+1.0	^a 71.2	-0.2	75.2	-0.8	71.3	-2.2	66.6	-0.1	61.2	+6.1	45.0	+1.6	^b 29.5	-4.5		
Hightstown.....			^a 34.4	+4.3	^a 45.4	+6.4	50.2	+0.4	62.2	+1.1	70.5	+1.1	74.0	0.0	70.7	-1.2	66.0	-0.6	58.8	+5.1	^a 43.6	0.0	28.7	-4.9		
Inlaystown.....															70.5	-2.6	67.0	+0.3			43.8	-0.5	29.0	-5.6		
Indian Mills.....	35.4	+4.0	34.5	+2.4	45.2	+5.4	51.4	+1.1	62.0	0.0	69.8	-1.2	73.9	-1.2	70.5	-2.6	66.8	+0.7	60.7	+6.3	45.0	+1.6	^b 30.6	-3.4	53.8	+1.1
Lakewood.....	34.4	+2.3	33.6	+3.8	43.6	+3.6	49.8	+0.1	61.1	+0.6	68.8	+1.2			70.0	-0.7	64.6	-0.8	59.3	+4.0	43.8	+0.6	30.1	-3.7		
Moorestown.....	35.3	+5.2	35.0	+4.0	45.4	+6.6	51.0	+1.0	62.2	+1.1	70.5	+0.3	74.6	-0.2	70.8	-1.7	66.2	+0.2	60.2	+6.0	^b 44.7	+1.7	30.8	-2.5	53.9	+1.8
Trenton.....	34.8	+4.3	34.4	+3.7	43.0	+3.9	49.9	+0.1	62.0	+0.9	70.8	+1.3	75.1	+0.6	70.6	-2.4	66.0	-0.9	58.5	+2.9	43.8	-0.6	28.9	-5.5	53.2	+0.7
Tuckerton.....	36.0	+4.3	34.2	+2.1	43.2	+4.2	49.4	+1.5	60.8	+1.1	68.9	-0.1	74.2	+0.1	71.3	-0.9	66.8	-0.8	62.2	+7.4	^a 45.2	+1.2	^a 31.5	-3.0	53.6	+1.5
Vineland.....	^b 36.6	+4.6	36.1	+3.6	^b 46.8	+6.5	^a 52.4	+1.7	^d 62.6	+0.4	^e 71.0	-0.6	76.0	-0.4	^b 72.8	-0.8	^e 68.6	+1.7	^b 63.4	+8.0	46.6	+2.7	31.8	-2.6	55.4	+2.1
Woodbine.....									^b 61.4	+1.0	^a 69.8	+0.8	^a 73.7	-0.2	70.1	-2.1	65.9	-0.4	62.0	+5.4	45.6	+1.6	^d 31.9	-3.1		
Philadelphia, Pa.....	37.7	+5.9	37.6	+4.8	45.4	+5.4	52.4	+1.6	64.0	+1.8	72.0	+0.8	77.2	+1.4	73.3	-0.5	68.8	+1.4	61.2	+4.9	46.8	+1.9	32.5	-3.2	55.7	+2.2
<i>The Sea Coast.</i>																										
Asbury Park.....			^a 34.8	+2.9	43.6	+5.3	^a 48.2	+0.1	59.8	+1.1	^c 65.1	-3.1	72.8	-0.1	71.3	-0.6	^a 67.2	+0.3			^b 46.2	+2.0	^b 32.4	-2.1		
Atlantic City.....	37.4	+4.9	35.8	+2.8	43.4	+4.6	48.8	+1.2	59.9	+2.4	66.4	-0.4	73.8	+1.3	72.0	-0.6	67.8	+0.2	61.8	+4.4	47.2	+1.7	33.7	-2.7	54.0	+1.6
Cape May City.....	37.6	+3.5	36.4	+2.3	44.1	+3.3	50.0	+1.6	60.7	+2.2	67.4	-0.3	74.4	+1.0	73.4	0.0	68.3	-0.7	63.1	+3.5	47.8	+0.4	34.6	-3.3	54.8	+1.1
Long Branch.....	32.9	+2.4	32.6	+0.6	^b 40.2	+2.0	^c 47.0	-1.7	58.3	-0.3	64.8	-2.7	^e 73.0	+0.4	69.8	-1.6	65.4	-0.6	58.0	+3.0	43.4	-0.9	29.3	-4.7	51.2	-0.4
Sandy Hook.....	35.0	+5.3	34.7	+4.0	42.1	+5.4	48.0	+1.3	59.6	+0.8	68.0	-0.4	73.6	+0.3	71.1	-1.6	67.1	-0.3	59.6	+2.9	45.7	+1.2	30.8	-3.8	52.9	+1.2

Letters of alphabet denote number of days missing.

Monthly Maximum Temperatures for the Year 1919, with Dates.

STATIONS.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.	
	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.	Maximum.	Date.
<i>The Highlands and Kittatinny Valley.</i>																								
Belvidere.....	57	2	50	3†	71	21	83	7	91	29†	97	3	96	4†	89	24	89	8	83	3	68	1	50	7
Charlotteburg.....	54°	1	49	3	65	21	72	7	87	29	95	3	96	5	85	24	88	7	84	3	68	1	52	13
Dover.....	58	2	51	3	67	21	80	7	91	29	95	3	96	5	88	24	89	7†	85	3	68	1	56	13†
Layton.....	55	2	52	3	69	26	85	7	91	29	98	3	99	4†	90	24	92	7†	91	3	68	1	53	14
Newton.....	56	1	48	3	65	21†	80	7	88	29	94	3	93	3†	85	23	88	7	82	3	66	1	52	14
Phillipsburg.....	58	1	50	28	69	26	84	7	92	29	99	3	100	5	90	24	92	7	85	3	68	1	47	10
Sussex.....																			87	3	63	1	48	7†
<i>The Red Sandstone Plain.</i>																								
Bergen Point.....	62	2	49	3	63	25†	70	7†	92	29	96	4	98	4†	91	24	92	8	86	3	72	1	59	13†
Boonton.....	58	1	52	28	68	21	78	7	90	29	97	3	99	4	89	24	93	7	85	3	70	1	57	13†
Elizabeth.....	60	2	50	3†	71	21	80	7	92	29	97	3	100	4†	92	24	93	7†	88	3	73	1	57	13†
Flemington.....	60	2	54	3	71	21	81	7	94	29	96	3	101	4†	91	24	95	7	89	3	70	1	57	14
Highwood.....	59	2	48	3	67	21	74	7	92	29	94	4	98	4†	89	24	89	8	85	3	70	1	58	13
Jersey City.....	61	2	49	24	72	21	73	23	95	29	95	2†	102	4†	92	24	95	7	88	3	73	1	59	14
Kearny.....																					72	1	60	14
Lambertville.....			49	28	65	21	75	7	88	30	92	3	96	4†	87	24	88	8	84	28	69	1	58	14
Little Falls.....	61	1	52	28	69	21	79	30	94	30†							92	7	86	3	74	1	58	13
Newark.....	58	1	50	3	66	21	79	7	92	29	95	2	101	4	90	24	93	7	88	3	71	1	60	13
New Brunswick.....	60	2	53	28	77	21	79	7	92	29	94	4	98	4†	89	24	92	8	87	3	71	1	60	14
Palisades Park.....	59	1†	50	28	68	21	74	7	92	29	95	4	100	4	90	24	93	7	87	3	71	1	57	14
Paterson.....	61	2	53	3	71	21	82	7	95	29	98	3†	102	4	92	24	94	7	90	3	72	1	57	13†
Plainfield.....					69	21	80	7	90	29	95	3	97	5	89	24	91	8	86	3	72	1	57	14
Somerville.....	59	2	52	3†	70	21	79	7	91	29	97	3	99	4†	95	7	93	7†			72	1	57	14
South Orange.....	59	1	48	23†	67	21	77	7	90	29	93	4	97	4†	88	24	88	7†	82	3	71	1	58	13†
New York, N. Y.....	60	1	51	28	65	21	76	7	90	29	92	4	98	4	89	24	91	8	85	3	70	1	60	13
<i>The Southern Interior.</i>																								
Bridgeton.....	57	28	65	14	75	17	77	7	90	5†	94	3	97	4†	93	24	94	8	92	3	75	1	66	13
Burlington.....	60	2	60	28	75	17	80	7	92	30	98	3	103	4	94	24	94	8	89	3	73	1	60	13
Camp Dix.....	60	2	59	14†	75	17†	80	7	86	5	95	3	102	5	91	24	92	8	88	3	72	1	65	13
Clayton.....	62	2	61	28	74	17	78	7	91	30	98	3	102	4†	98	24	90	8	88	3	72	1	66	13
Hightstown.....			57	28	70	17†	80	7	90	30	95	3	100	4†	91	24	91	8	84	3	70	1	57	13
Imlaystown.....															91	21†	96		90	3	73	1	61	13
Indian Mills.....	60	2	65	14	75	17†	81	7	91	5†	98	3	101	5	93	24	94	8	90	3	74	1	67	13
Lakewood.....	59	2	59	28	69	17	82	7	90	29	95	4	100	4	90	24	90	8	85	3	72	1	67	13
Moorestown.....	60	1†	62	14	74	17	80	7	90	30	95	3	99	5	89	24	89	8	84	3	71	1	63	13
Trenton.....	60	1	58	28	72	17	77	7	90	30	96	3	101	5	90	24	91	8	87	3	70	1	59	13
Tuckerton.....	55	2	56	28	65	13†	71	24	92	29	92	4	98	4†	94	24	96	8	90	3†	76	1	63	7
Vineland.....			61	28	77	17	79	7			96	3	101	5	92	24	94	8	91	3	76	1	66	13
Woodbine.....									92	30	91	3	98	5	90	24	88	8	88	3	75	1	65	13
Philadelphia, Pa.....	61	1	61	14	73	17	77	7	92	30	97	3	100	4	92	24	92	8	90	3	72	1	61	13
<i>The Sea Coast.</i>																								
Asbury Park.....	59	1	48	24	63	21	65	8	90	5	86	24	98	5	92 ^a	24	92	8	88	3	72	1	66	13
Atlantic City.....	54	1	51	24	62	13	72	24	90	30	84	3	99	3	91	24	86	8	90	3	74	1	58	10
Cape May City.....	55	2	50	14	62	21	72	24	86	30	85	3	98	3	92	24	88	9	88	3	72	1	60	7
Long Branch.....	54	1†	50	14	63	21	70	7	91	29	87	24	97	3	92	24	94	8	86	28	67	1	64	13
Sandy Hook.....	58	1	49	28	57	5	69	7	84	29	87	4	98	4	89	24	89	8	83	3	69	1	57	14

† On other dates also.

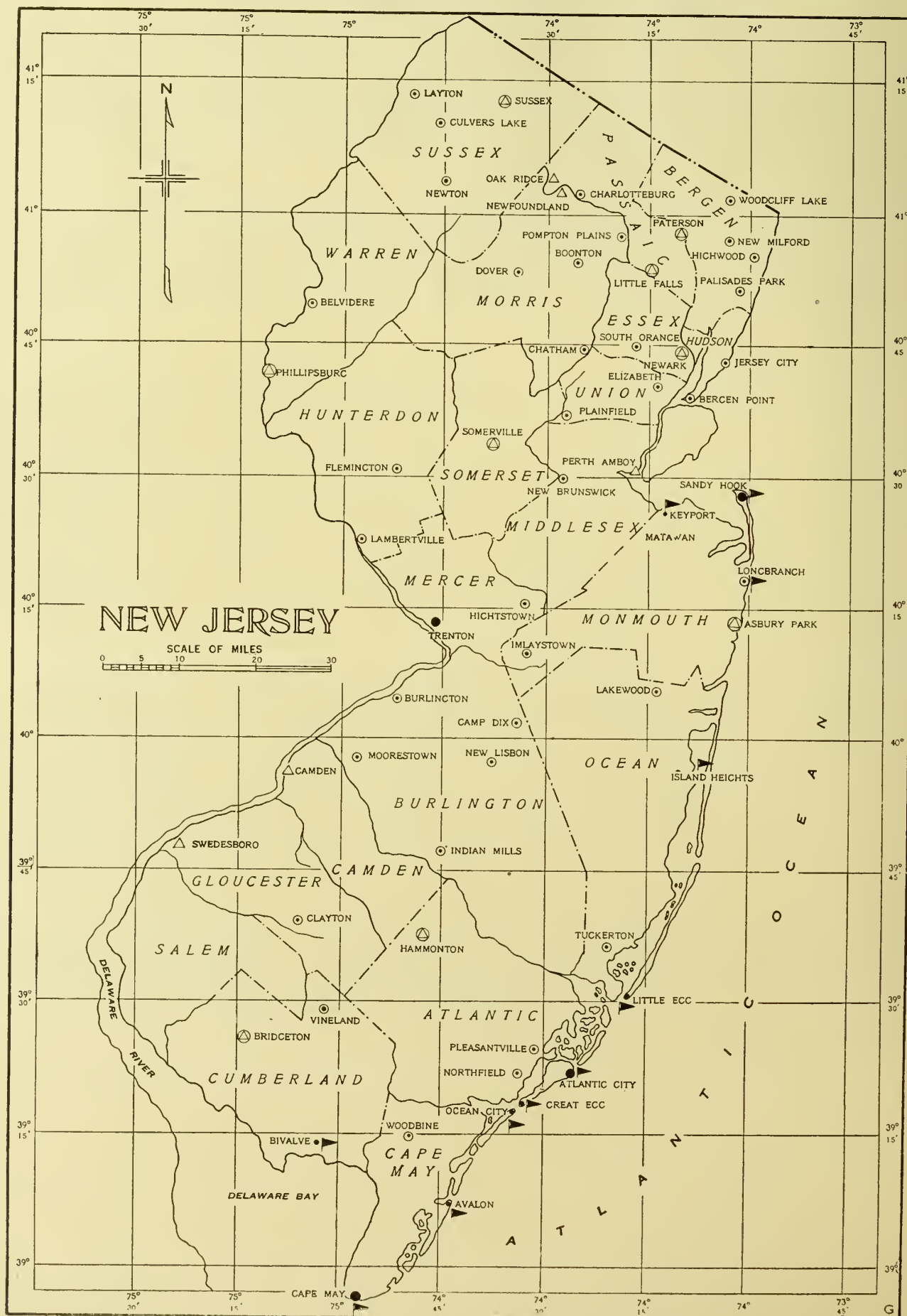
Letters of alphabet denote number of days missing.

Monthly Minimum Temperatures for the Year 1919, with Dates.

STATIONS.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.	
	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.	Minimum.	Date.
<i>The Highlands and Kittatinny Valley.</i>																								
Belvidere.....	4	5†	12	11	19	14	20	2	38	13	46	29	49	12	44	29	38	27	30	13	18	21	-7	18
Charlotteburg.....	1	11	12	10†	20	7†	18	1†	31	19	38	30	43	12	38	30	32	27	27	8†	13	16	-10	19
Culvers Lake.....	-9	5†	4	11	.....	.....	10	2	29	1	37	29	45	12	39	28	30	27	24	13	10	21	-18	18
Dover.....	5	12†	13	11	21	14†	19	1†	36	19	44	23†	49	12	46	28	36	27	31	13	18	16	-8	18
Layton.....	-7	5	14	10	18	15	21	25	32	19	40	23†	44	12	43	29	34	27	25	13	14	21	-11	18
Newton.....	0	10	9	19	12	14	15	2	39	11	45	29	50	12	49	27†	38	27	30	13	19	21	-10	18
Phillipsburg.....	3	5	14	11	20	14	21	1†	40	13†	47	29	50	12	49	29	39	27	33	13	21	21	-5	18
Sussex.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30	8	21	16	-12	18
<i>The Red Sandstone Plain.</i>																								
Bergen Point.....	9	10†	16	11	20	30	21	2	40	1	49	9	55	1	51	27	45 ^b	19	.....	.....	22	21	-2	18
Boonton.....	4	12†	9	11	20	8	21	1†	38	1†	43	23	50	9†	46	28†	38	27†	29	13	18	16†	-7	18
Elizabeth.....	8	12	12	11	24	14	21	2	41	16†	47	23†	52	12	49	10†	42	18†	33	13	22	16†	-5	18
Flemington.....	8	12	15	11	24	14	22	1	39	16	48	30	53	12	50	29	41	27	35	8†	22	16†	-7	18
Highwood.....	4	12	10	11	24	7†	20	2	39	1†	45	23	51	12	48	10†	41	18†	32	13	26	16	-7	18
Jersey City.....	11	10†	17	11	25	14†	23	2	44	10	53	29	59	1†	58	3†	47	27	38	13	26	20	-1	18
Kearny.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	35	13	25	20	-2	18
Lambertville.....	7	12	.....	.....	22	14	21	1†	39	16†	46	29†	51	12	49	29	41	27	33	13	20	16†	-5	18
Little Falls.....	9	10	14	11	24	7†	17	1	43	10†	48	22	.....	.....	51	9†	42	26	35	13	25	15	0	18
Newark.....	8	12	17	11	22	14	22	1	42	10	48	29	54	31	56	14†	44	19	39	13†	25	20	0	18
New Brunswick.....	8	12	16	11	23	14	22	1†	40	16	48	29†	54	1†	52	9†	43	19†	36	8†	22	16†	-4	18
Palisades Park.....	5	12	10	11	22	7	21	1†	39	1†	45	23†	52	12	48	10†	40	27	31	13	20	16	-6	18
Paterson.....	9	10†	16	11	24	30	22	2	42	1	49	29	56	12	52	28	44	27	38	13	25	21	2	18
Plainfield.....	.....	.....	.....	.....	23	14	22	2	40	16	47	30	50	12	49	28	41	19	33	8†	19	16	-6	18
Somerville.....	5	12†	10	11	17	14	20	1†	35	16	44	13†	46	12	48	10†	42	7	.....	.....	20	21	-4	18
South Orange.....	9	10†	16	11	24	28†	21	1†	42	1	49	23†	55	9†	52	9†	44	19	36	13	23	21	-3	18
New York, N. Y.....	9	10	16	11	22	28	21	1	42	10	52	29	58	1	56	14	51	27	39	13	26	20	0	18
<i>The Southern Interior.</i>																								
Bridgeton.....	10	7	16	11	27	14†	22	2	41	13	49	30	53	1	50	9	44	28	36	13	23	21	2	18
Burlington.....	9	12	16	11	25	14	21	2	43	13	49	30	52	12	52	29	45	28	36	13	22	21	0	18
Camp Dix.....	8	12	15	11	25	14	21	2	41	16	42	13†	52	9†	50	10†	40	19†	34	13	19	21	-2	18
Clayton.....	10	7†	16	11	25	14	22	2	42	7	46	13†	51	12	52	10	43	27†	34	8	20	21	1	18
Hightstown.....	.....	.....	17	11	25	14†	20	1	40	16	46	30	52	1†	51	9†	40	27	32	13	20	21	-2	18
Inlaytown.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	47	29	40	28	.....	.....	19	16	-2	18
Indian Mills.....	4	12	11	11	22	12	19	2	36	16	42	30	47	12	48	10†	38	19	33	9†	15	16†	-4	18
Lakewood.....	6	13	14	11	24	8	22	1†	36	16	43	30	49	9	48	29	38	19†	31	9	18	16†	-4	18
Moorestown.....	8	12	14	11	21	2	21	1†	40	16	47	30	54	1	52	9	45	28	35	13	26	20	0	18
Trenton.....	9	12	17	11	22	31	21	1	43	10	50	29	56	1	55	28	46	27	36	13	25	21	-1	18
Tuckerton.....	7	13	11	11	24	8	15	2	40	13	42	13	48	12	50	3†	39	19	35	8†	17	21	-1	18
Vineland.....	11	12	16	11	27	14†	22	2	41	13	49	30	49	1	54	26	44	27†	36	13	22	21	2	18
Woodbine.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	47	27†	40	19	33	19	15	21	1	21
Philadelphia, Pa.....	13	12	21	11	24	31	24	1	44	11	53	29	61	1	59	14	50	27	41	13	29	20	4	18
<i>The Sea Coast.</i>																								
Asbury Park.....	13	12	16	11	26	28	22	1†	44	11	48	9	56	1	56	26†	48	19†	.....	.....	25	21	-1	18
Atlantic City.....	12	12	19	11	26	31	23	1	44	13	52	30	56	1	58	26	50	28	41	13	28	20	3	18
Cape May City.....	12	12	21	11	29	31	26	1	46	13	50	30	55	1	59	9	48	28	41	13	29	21	3	18
Long Branch.....	7	5	16	6†	22	31	22	1	43	13	50	30	56	1	55	10†	42	28†	39	8†	24	21	-1	18
Sandy Hook.....	12	10	20	11	23	14	23	1	45	10	55	29	59	1	59	29	53	27	46	13	29	21	3	18

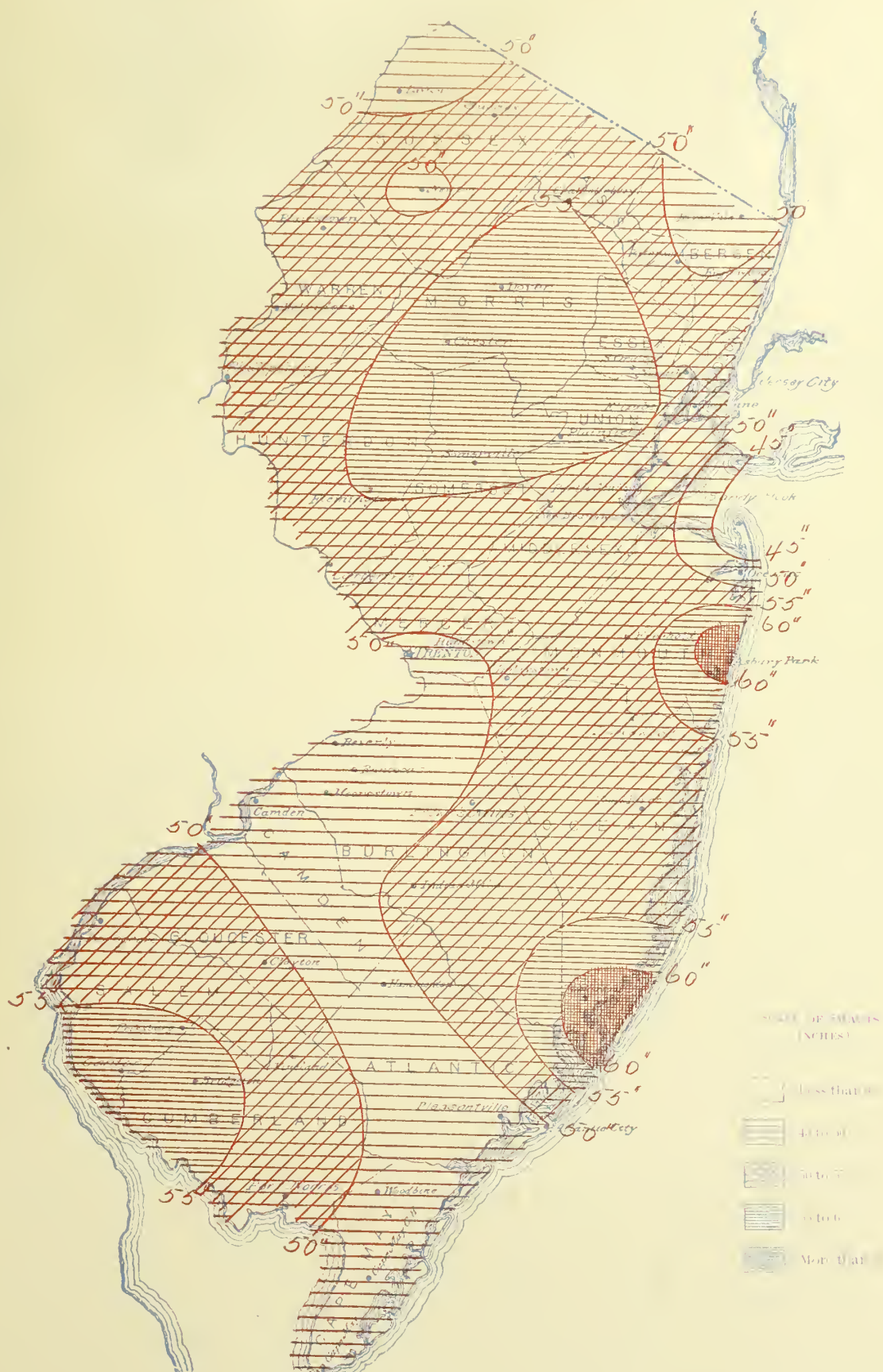
† On other dates also.

Letters of alphabet denote number of days missing.



OBSERVATION AND FORECAST DISPLAY STATIONS.

TOTAL PRECIPITATION FOR THE YEAR 1919



REGULAR, SPECIAL, AND COOPERATIVE STATIONS AND OBSERVERS.

Stations.	Observers.	Stations.	Observers.	Stations.	Observers.
Asbury Park.....	Miss Dorothy A. Alexander.	Highwood.....	Charles J. Bates.	Paterson.....	Marion T. Probert.
Atlantic City.....	U. S. Weather Bureau.	Imlaystown.....	Wm. R. Hendrickson.	Phillipsburg.....	D. Wilson Smith.
Belvidere.....	Samuel J. Hixson.	Indian Mills.....	James M. Armstrong.	Pleasantville.....	Lincoln Van Gilder.
Bergen Point.....	Wm. H. Mitchell, D. D. S.	Jersey City.....	Samuel K. Pearson, Jr.	Pompton Plains.....	M. S. Taylor.
Boonton.....	J. W. Demmers.	Kearny.....	Wm. J. Chandler, M. D.	Sandy Hook.....	U. S. Weather Bureau.
Bridgeton.....	Henry A. Jorden.	Lakewood.....	Richard W. Holman.	Somerville.....	Peter V. D. Hardcastle.
Burlington.....	D. S. B. McCoy.	Lambertville.....	Thomas R. Hunt.	South Orange.....	Wm. H. Meeder.
Cape May City.....	U. S. Weather Bureau.	Layton.....	A. M. Depue.	Trenton.....	U. S. Weather Bureau.
Charlotteburg.....	George S. Briggs.	Little Falls.....	Montclair Water Co.	Tuckerton.....	Frank R. Austin.
Chatham.....	Paul Molitor.	Long Branch.....	Wm. D. Martin, Jr.	Vineland.....	H. C. Himes.
Clayton.....	Marvin Porch.	Moorestown.....	David S. Haines.	Woodbine.....	Jos. H. Cohen.
Culvers Lake.....	Brice E. Riker.	Newark.....	William Wiener.	Woodcliffe Lake.....	Hackensack Water Co.
Dover.....	Wm. C. Harris.	New Brunswick.....	N. J. Experiment Station.		
Elizabeth.....	L. B. Bonnett.	New Milford.....	Hackensack Water Co.		
Flemington.....	Hiram E. Deats.	Newton.....	Irving J. Kern.		
Hammonton.....	G. H. Parkhurst.	Northfield.....	Wm. L. Flick.		
Hightstown.....	Rev. W. A. Stanton.	Palisades Park.....	George P. Kirsten.		
				Cranberry Marsh Station.	
				New Lisbon.....	Joseph Haines.

FORECASTS AND DISTRIBUTING CENTERS.

Stations.	Displaymen.	Stations.	Distributors.	Stations.	Distributors.
<i>Weather and Temperature Flags.</i>		Cape May City, 40.....	U. S. Weather Bureau.	Somerville, 81.....	Postmaster.
Asbury Park.....	Asbury Pk Publicity Bureau.	Long Valley, R. F. D., 50.	Postmaster.	Sussex, 6.....	Postmaster.
Atlantic City*.....	Atlantic City Yacht Club.	Newark, 163.....	William Wiener.	Trenton, 446.....	U. S. Weather Bureau.
Bridgeton.....	Henry A. Jorden.	Newfoundland, R. F. D.,	Postmaster.		
Long Branch†.....	William D. Martin.	40.		<i>Forecasts by Telephone.</i>	
Newark.....	Central High School.	New York, N. Y., 362.....	U. S. Weather Bureau.	Camp Dix.....	Signal Officer.
Trenton†.....	U. S. Weather Bureau.	Oak Ridge, R. F. D., 100.	Postmaster.	Hammonton.....	Hammonton Tel. & Tel. Co.
<i>Forecast Distributing Centers.</i>		Paterson, 87.....	Farm Bureau.	Moorestown.....	Stokes Seed Farm.
Atlantic City—198.....	U. S. Weather Bureau.	Philadelphia, Pa., 116.....	U. S. Weather Bureau.	Paterson.....	Public Library.
		Phillipsburg, 71.....	Postmaster.	Perth Amboy.....	Public Library.
		Pittstown, 150.....	Postmaster.	Swedesboro.....	Peoples Rural Tel. Co.
		Sandy Hook, 20.....	U. S. Weather Bureau.		

Figures following the name of town indicate the number of forecast cards distributed daily, by mail, to points in New Jersey. Forecasts are available each business day after 10:30 a. m. to all telephone stations, in most instances without payment of toll. Special forecast distributors by telephone above.

* In summer only. † Cold wave warnings.

WARNINGS.

Stations.	Distributors.	Stations.	Distributors.	Stations.	Distributors.
<i>Special Warnings.</i>		Newark.....	William Wiener.	Hammonton.....	A. J. Rider.
Atlantic City.....	U. S. Weather Bureau.	Paterson.....	Farm Bureau.	Jamesburg.....	John W. Vohman.
Bordentown.....	Delaware & Atlantic Teleg. & Tel. Co.	Perth Amboy.....	Public Library.	Mays Landing.....	C. D. Makepeace.
Bridgeton.....	Henry A. Jorden.	Sandy Hook.....	U. S. Weather Bureau.	Medford.....	Evans & Wills.
Cape May City.....	U. S. Weather Bureau.	Somerville.....	Postmaster.	New Lisbon.....	J. J. White.
Freehold.....	Farm Bureau.	Trenton.....	U. S. Weather Bureau.	Pemberton.....	Theo. H. Budd.
Jersey City.....	Union Trust Co. of New Jersey			Toms River.....	Geo. H. Holman.
Long Branch.....	William D. Martin.	<i>Warnings of Frosts in Cranberry Marshes.</i>		Vincentown.....	Ethelbert Hames.
Millville.....	Delaware and Atlantic Teleg. & Tel. Co.	Belle Plain.....	E. H. Durell.		
Mount Holly.....	Delaware and Atlantic Teleg. & Tel. Co.	Bordentown.....	S. F. Garrison.	<i>Storm Warning Display Stations.</i>	
		Collingswood.....	F. F. Collings.	Atlantic City.....	Great Egg.
		Cream Ridge.....	Isaac Harrison.	Avalon.....	Keyport.
				Bivalve.....	Little Egg.
				Cape May Point.....	Sandy Hook.

